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W E E K L Y   B U L L E T I N  
Of the Offices of  
WESTERN IRRIGATION AGRICULTURE.  
and  
DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

July 2, 1921

No. 1

Western Irrigation Agriculture

Field Notes.

San Antonio.

Climatic conditions were ideal for the growth of all crops during the week ending June 18. A precipitation of .71 inch occurred June 12, while a trace was recorded on June 13, 16 and 17 respectively. One day was cloudy and six days were partly cloudy. The maximum temperature was 92, minimum 70, and greatest daily range 22.

Very little work was possible the first three days of the week and this time was devoted to the repair of farm buildings and equipment and to cleaning up the grounds. During the latter part of the week all cotton, cowpeas, and bean varieties were cultivated. Grain sorghum on C4, planted May 20 and Salvia hispanica on A3 were thinned. The general chopping of Johnson grass was continued.

Yuma.

The maximum temperature for the week ending June 18 was 103; minimum 52, and greatest daily range 36.

Although this week has been cooler than the one previous, all crops have continued to make a good growth. The fields of volunteer cotton are now setting on bolls and the new plantings are beginning to blossom.

The alfalfa seed fields in all parts of the project seem to be demanding more irrigation this season. There will be a considerable increase in the alfalfa seed acreage this year. The bulk of the seed will be handled by the Farm Bureau organization and the Hairy Peruvian Alfalfa Growers' Association.

The critical stage of the flood season of the Colorado river has not yet been passed. The present discharge is 124,100 second feet with a reported increase to 165,000 second feet, due on June 28.

Station work performed during the week consisted of harvesting purple vetch on plat variation lands, C32 to 35; planting grain sorghums, B12 to 16; harvesting third cutting of alfalfa A1 to 8; cultivating cotton and grain sorghums, and general hoeing and irrigating.

Demonstrations on Reclamation Projects.

Milk River.

During the week ending June 18, fourteen farm visits were made and 12 requests for assistance were received. The weather records at Malta show a maximum temperature of 91 and a minimum of 50 degrees with a rain-





Milk River (continued)

fall of 2.03 inches.

Considerable individual help was given to farmers during the week by way of running ditches, demonstrating the use of canvas dams, and actual application of water to the land. An effort was made to attend to urgent requests, and in most cases assistance was given by actual demonstration. However, suggestions were made to some farmers with reference to changing existing irrigation systems. Advantages and disadvantages of different methods were described.

A border system of irrigation is being completed on Mr. Jones' and Mr. Brown's farms near Malta and Saco which will help to demonstrate the advantage of this method. A similar method is to be worked out on Mr. Statler's farm near Hinsdale.

All field operations and irrigation were suspended during the latter part of the week on account of heavy rain. On the Glasgow unit of the project a rainfall of five inches was recorded. The Vandalia canal is closed down at the headworks and there will be no further appreciable demand for water until the middle of July.

A number of farmers on the project are anxious to grow an alfalfa seed crop this year and several fields are, by request, now under the writers observation and are being watched closely for indications of poor seed prospects.

Uncompahgre.

The directory of breeders of purebred livestock on the Western Slope finally went to press on Monday of the week ending June 13 and should be published within a few days. This work has taken considerable time for the past several months, practically all of the work of assembling the names of breeders having been left to this office and to the County Agent.

Hog cholera recently appeared in the Shavano district, about eight miles from Montrose. The farm was visited with Dr. Griffith, veterinarian for the local Health Protective Association and 50 head of hogs were vaccinated. Another suspected case occurred later in the week but was not diagnosed.

A spray demonstration for alfalfa weevil control was attended this week. The weevil is gradually spreading over the project, the quarantine area being extended somewhat each year. The infestation is becoming heavier, numerous fields being considerably damaged this year. An agent from the office of the State Entomologist is stationed on the Western Slope to promote the use of control methods. Spraying with zinc arsenate is recommended.

All work has been more or less interrupted this week by floods in the Uncompahgre River which has reached the highest point ever known. Much damage was done to farms, bridges and government dams and headgates. As a result of the washing out of government structures several canals have been dry, but the water is falling rapidly and a large force of men is at work repairing the breaks so that it will probably be only a short time until water can be turned into all ditches again. Several hundred men have been at work trying to control the river to prevent as much





Uncompahgre, (continued).

damage as possible especially to farms along the river, but in several places crops were washed out or buried and considerable land has been destroyed. One whole day and parts of two others were spent in assisting in the prevention of such damage.





WEEKLY BULLETIN  
Of the Offices of  
WESTERN IRRIGATION AGRICULTURE  
and  
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July 9, 1921.

No. 2

Western Irrigation Agriculture.

Huntley.

The maximum temperature for the week ending June 25 was 90, minimum 53, and precipitation .21 inch.

Crop conditions continue rather favorable on most parts of the project. Some slight damage to crops from grasshopper invasion is reported. On the dry lands in the northern part of the county this damage is reported to be serious and large amounts of poison mash have been distributed by the county through the Farm Bureau. The thinning of sugar beets on the project is delayed seriously through lack of efficient labor and many beet fields will be seriously damaged as a consequence.

Work on the station during the week consisted mainly of repairing ditches and irrigating alfalfa and grain.

Director Trowbridge of the North Dakota Experiment Station and Leroy Moenav of the Dickinson, North Dakota, Station were visitors at the experiment Farm on June 17.

Newlands.

During the period ending June 11 the highest temperature recorded was 97, minimum 50, and precipitation 0.

During the period ending June 13, the maximum temperature was 93, minimum 36, and precipitation .42 inch.

During the period ending June 25, the highest temperature was 93, minimum 45, and precipitation .19 inch.

Several experiments with ammonium sulfate applied on both good and poor soils in field and garden indicate that this fertilizer is quite effective in increasing crop growth. Beneficial results are usually seen in less than ten days after applying.

An experiment has been started to determine the beneficial effects, if any, of aluminum sulfate, ammonium sulfate and manure in reclaiming the hard alkali soil of Field B. Thirty galvanized iron cylinders 16 x 36 inches were filled with the soil and the treatments applied to the surface. The application of aluminum and iron sulfate varied from one to eight tons per acre. The ammonium sulfate was applied at 500 pounds per acre, both alone and in combination with the iron and aluminum sulfates. The manure was applied at 30 tons per acre both alone and in combination with other salts. All the hay from field B11 -22 has been cut and stacked.



Newlands (continued).

The hay from all other fields is in the stack. Haying this year over the project began June 20. The crop appears to be about normal except for a few low-lying fields that were injured by a frost early in May.

The sugar beets on D7 have been hoed and thinned.

Scottsbluff.

The weather during the weeks ending June 18 and 25 was hot and dry. This was especially true the latter week. The maximum temperature for the week ending June 18 was 92, minimum 50, and precipitation .39 inch. For the week ending June 25, the maximum temperature was 93, minimum 44, and precipitation 0.

Where there was sufficient moisture, plants have made a good growth, but many grain fields are suffering from a lack of moisture. On June 16, at the time the farmers were beginning to irrigate their small grain, the main canal broke near the head, and the project has been without water ever since. It is expected that the break will be repaired so that water will be in the canal by the middle of next week. This is one of the worst breaks in the history of the project. Many fields of grain will be beyond recovery before it will be possible to get water on them.

Some of the barley on the experiment farm in which alfalfa was seeded was clipped in the hopes of saving the alfalfa. Small grain is the only crop that is suffering now, but within a week the first cutting of alfalfa will be in the stack and alfalfa will need water badly. Unless heavy rains come within a week or ten days, the break in the canal will be very costly.

As all of the beets came up about the same time, some of them will be rather large before being thinned. Beet help is almost impossible to get. All of the experimental plats at the experiment farm have been thinned. The alfalfa has been cut and will be stacked next week.

Demonstrations on Reclamation Projects.Newlands.

The week ending June 25 was one of much activity in the harvesting of alfalfa hay. The work has been interfered with on account of local showers, which, while keeping the local ranchers in some suspense, has not done much damage. The lack of funds has interfered to some extent in the harvesting of the first crop of alfalfa and the harvesting of hay on some ranches has been delayed on this account. This is very unfortunate for this district because it is expected that there will be considerable competition for a hay market and quality will mean more than usual this fall when ranchers are looking for a market.

In connection with the harvesting of the hay crop, considerable time has been spent with a number of hay growers arranging for them to keep an account of the labor cost of the harvesting operation. It will be of interest to observe any differences in final cost by these differences in methods of putting up alfalfa hay.





Newlands (continued)

Up to the present time, labor for hay harvest has been ample. Two and one-half dollars per day is the prevailing wage throughout the valley. An effort was made to maintain a two dollar scale but this did not last long.

Much time has been devoted to herd testing and answering inquiries relative to general herd management.

The local creamery has been receiving butter fat at the rate of about 1,000 pounds daily. The price has averaged about 37 cents for the week. The creamery pays San Francisco quotations for extras at the present time. Butter from the local creamery is retailing at Fallon for 45 cents per pound. The present local price for butter fat continues to make dairying attractive in the face of a very poor outlook for an outside market for alfalfa hay. The present output of butter fat in the valley is estimated to be about 2,000 pounds per day.

Nine farm visits were made and seventeen calls for assistance were received.

Sun River.

During the week ending June 25, thirteen farm visits were made and eleven calls for assistance were received.

Intense heat and dry winds have prevailed during the week. Dry land grain has been seriously damaged, the loss already amounting to approximately fifty per cent of the total yield.

Work during the week consisted in assisting farmers to locate head ditches and plan irrigation systems best suited to their land. One farmer was persuaded to try the corrugation method on twenty acres seeded to alfalfa. Excellent results were received and as a result this system is becoming quite popular.

Mr. F. W. Boier, of the U. S. Bureau of Crop Estimates for Montana spent two days on the project and some time was spent in company with him visiting farmers here.

Extensive irrigation has been carried on the past few days. The maximum head of water was delivered yesterday when the gage at the Fairfield drop recorded 276 second feet.

Prospects for a bumper crop on the project never looked better. Mr. Ginger, president of the Fairfield State Bank, reports that irrigated grain here, exceeds the 1916 stand when 40 bushels per acre were harvested.

Milk River.

Almost daily showers occurred over the project during the week ending June 25, 1921, making field operations rather difficult. A small percentage of the alfalfa crop has been damaged by rain. Meteorological data were recorded as follows: Maximum temperature 89, minimum 75, and precipitation .67 inch.

Four annual farm bureau meetings were scheduled during the week, and the writer had been asked to take part but meetings were all postponed on account of rain except one at Harlem. Five farm visits were made during the week and seven calls for assistance were received, the time spent on each farm varying from two hours to one day. Ditches were laid out on 80 acres.





Milk River (continued).

No irrigation has been going on this week. The main canals on the Malta, Saco, and Glasgow units of the project are all closed and no applications for water have been received by the Reclamation Service up to date.

Cutting of first crop alfalfa is now well under way on the project. However, a larger acreage will probably be left for seed this year than usual. A number of fields were examined for seed prospects during the week, by request of the farmers, and with about one third of the fields in bloom only a small percentage of the blooms are opened yet. More fields are to be examined during the coming week when the plants will probably be in full bloom.

Uncompahgre.

The rounds of the pig clubs and sheep clubs were made with Mr. King during the week ending June 25 to weigh all pigs and lambs. Pigs which varied from 29 pounds to 62 pounds when the members received them now vary from 45 pounds to 131 pounds. The pig which has made the greatest gain is a spotted Poland China, farrowed March 4. This is the pig which now weighs 131 pounds. It is an exceptionally good type of gilt.

Some work was done this week toward the collection of data regarding the cost of growing and harvesting alfalfa. A number of men have volunteered to furnish the data wanted. Other men will be visited in this connection next week.



# WEEKLY BULLETIN

Of the Offices of

## WESTERN IRRIGATION AGRICULTURE and DEMONSTRATIONS ON RECLAMATION PROJECTS.

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Vol. XIX.

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No. 3

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### Western Irrigation Agriculture.

#### Scottsbluff.

The weather during the two weeks ending July 9 was hot and dry. The maximum temperature was 99, minimum 45, and precipitation .35 inch.

The break in the main canal was repaired so that water was again available, after being out about eight days. As soon as the water was in the canal a rotation system was adopted, giving an 80-acre farm unit two second feet four days out of eight.

The small grain and alfalfa had become very dry while the water was out of the canal. It has been impossible to get over these crops with the limited amount of water available. In many cases the yield of small grain will be cut down because of the lateness in getting water on it. Where there is sufficient moisture, the crops are looking very good.

The cows have been removed from the grass and sweet clover pastures because of overgrazing, due to the small growth made on account of the lack of moisture. The cows will be returned the first of next week.

Potato bugs are rather troublesome this year. Most of the fields on the project have been sprayed. Grasshoppers are less numerous this year than last year. The beet web worm has shown up, meaning that most of the beet fields must be sprayed.

#### San Antonio.

During the week ending June 25, the highest temperature recorded was 102, lowest 64, and greatest daily range 37. No precipitation occurred although much cloudy weather prevailed. The high temperatures caused very satisfactory growth of cotton, and also seems to have held the cotton boll weevils to a minimum as only slight damage due to that insect has been noticed to date.

The late planted fields of cotton in the thinning experiments were thinned; Messrs. McNamara and McKeever of the Office of Crop Acclimatization having arrived at the station June 21 for the purpose of supervising this work.

A late planting of Dwarf milo and Darso grain sorghum was made on C4. Brush from the Dwarf and Acme varieties of broomcorn in the sorghum variety test on C4 and C5 was harvested and placed on racks to dry.

The pasture lot east of the farm buildings was plowed and will be kept fallow until November when it is planned to sow winter oats.

Orchards, farm roads and alleys between plats were cultivated and hoed.





San Antonio (continued).

During the week ending July 2 the maximum temperature was 96, minimum 71, greatest daily range 23, and precipitation .53 inch.

All Dwarf milo in the rotation and tillage fields was harvested. Practically no damage was done this year to early seeded milo by the sorghum midge. The first of these insects found to be working on the sorghum appeared June 8, after early seeded milo had set a full crop. Later seeded milo, and later maturing varieties of sorghums, which have flowered since June 8 have suffered midge damage in almost direct proportion to their lateness of maturity. Harvesting of the early varieties in the sorghum variety test on fields C4 and C5 was also begun during the week.

The plot of approximately two acres of ground laying east of the farm residence, which had not previously been broken, was plowed.

During the week ending July 9, the maximum temperature recorded was 99, minimum 70, and greatest daily range 28. A precipitation of .63 inch occurred in two small showers of .47 inch and .16 inch on July 6 and 8, respectively. Two days were cloudy and five partly cloudy. The cloudy sultry weather which prevailed was favorable for the development of boll weevils and that pest is now present in serious numbers. Corn ear worm, Heliothis obsoleta Fab., which have been a serious pest in the corn fields, are now becoming numerous in the cotton fields.

All cotton plantings, and orchards A1, A3, B3 and E3, were cultivated. Mature sorghum varieties on fields C4 and C5 were harvested. The second cutting of Rhodes grass for hay was made from fields A3, B3, and B4. Johnson grass has obtained such a hold on fields D3 and the south end of C3 that the growth is now being cut for hay. An attempt to control this pest on these fields will then be made by giving them a deep plowing.

Demonstrations on Reclamation Projects.Milk River.

During the week ending July 2, 16 farm visits were made and eight calls for assistance were received. Ditches were staked out on 120 acres and about 1200 acres of alfalfa examined for seed prospects.

The maximum temperature for the week was 91, minimum 51, and precipitation 1.60 inches.

Daily rains occurred over the project during the week and field operations are at a standstill. Field work has been very difficult on account of bad roads. Present indications are that there will be little, or no, further irrigation needed on the project this season and consequently the farmers are inclined to postpone their ditching work until fall.

Requests for information concerning alfalfa seed prospects came in daily during the week, and an effort was made to examine the fields in question in company with the owner. Fertilization of the alfalfa plants has been interfered with by frequent rains and the present outlook is that the seed crop will be light.





Milk River (continued).

During the week ending July 9, 15 farm visits were made and 2 requests for assistance received. The maximum temperature for the week was 98, minimum 62, and precipitation .55 inch.

There was no irrigation work done during the week, but if the weather continues hot and dry it will probably be resumed next week. Ditching and survey work that was contemplated has been postponed for the present. Nearly all cultivated crops on the project promise to mature this year without further irrigation and consequently there is no demand for planning and laying out irrigation systems for these crops.

Harvesting of first crop alfalfa is comparatively late this year due to the frequent rains, and the farmers are combining forces, wherever possible, to facilitate the gathering of the crop. Some work was done during the week towards getting help for the farmers and placing men in different haying crews where such service was asked for.

Some damage has recently been reported from the western part of Phillips county, by grasshoppers, and one day was spent in cooperation with county agent Stapelton in visiting infested farms and putting out a poison bran mash which has been recommended and which promises to be effective in their control.

Sun River.

During the week ending July 2, five farm visits were made, the time spent on each farm varying from six hours to one day. Ten calls for assistance were received, ditches were planned on four hundred acres and one meeting was attended.

The weather continued hot and dry on the project for the first six days, but Saturday a general downpour of rain was received in this section. Sufficient moisture fell to relieve the drought on dry land for some time.

The irrigated crops have made rapid growth and a comparison of the irrigated and non-irrigated crops gives a striking illustration of the value of irrigation.

Unit holders have been rushing their work preparatory to going on a rotation system next week, when the water will be delivered in different laterals at six day intervals.

The water in Sun River is holding up well and it is the opinion of the project manager that there will be a sufficient supply for all purposes this year.

During the week ending July 9, seven farm visits were made, the time spent on each farm varying from two hours to one day. Seven calls for assistance were received, one newspaper article was written, and one meeting was attended.

Most of the work accomplished during the week was in connection with irrigation. The greater part of the grain crop has received two irrigations and this week will finish up the remaining acreage. It will not be necessary to apply water again except where the crop is used for a nurse crop.





Sun River (continued).

Mr. Osgard from the Montana State College conducted several meetings through the county last week. On Friday a meeting for the farmers here was held at Bole. This office was requested to give assistance at the meeting. Mr. Osgard delivered a lecture on summer fallow and later a weeder demonstration was conducted. Six different types of weeders were demonstrated and explained.

The main canal of the Greensfield bench washed out the latter part of the week and it was necessary to suspend irrigation for two days while repairs were made.

Uncompahgre.

Monday and Tuesday of the week ending July 2 were given to stock judging trips for livestock clubs. There were 15 members present on the first day and 12 members the second day. Both boys and girls take a great deal of interest in this work which leads up to a contest to be held at the fair. Dairy cattle, beef cattle and hogs are studied on these trips which will be given as often as practicable through the summer.

The young Hereford bulls from the Sneffels ranch at Ridgway being used in the calf club were vaccinated this week against blackleg by Dr. Griffith of the local veterinarian association without charge. Rings were also put in their noses as they are getting too large for the boys to handle safely.

Loesch Brothers had one of their most valuable cows bloat this week on new alfalfa hay. The cow is on semi-official test and is expected to make 20,000 pounds of milk in ten months. She was stuck with a trochar and will probably not have her record seriously affected.

Milk tests were run on seven cows for Mr. Dorsey whose two sons are keeping milk records on the herd. They want to run regular tests for a while. The seven cows are producing about 5-1/2 pounds of fat per day, worth 28 cents per pound now. Fifty-four head of hogs were weighed for Mr. Dorsey also. These average 106 pounds and are running on alfalfa without any grain. They are to be turned into wheat as soon as it is ready and later may harvest a field of corn. Mr. Dorsey has records on the cost of these hogs up to date.



W E E K L Y   B U L L E T I N

Of the Offices of

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No. 4

Western Irrigation Agriculture.

Huntley.

Hot dry weather continued during the week ending July 16, and irrigation requirements of crops were so heavy as to necessitate rotation delivery of water. The maximum temperature was 97, minimum 53, and precipitation .18 inch.

The damage to crops by grasshopper invasion is becoming serious on many parts of the project although not much has been done in the way of control. At the experiment farm poisoned mash has been used effectively on several of the fields although some damage has been done to alfalfa and grain.

The boys' and girls' clubs of Yellowstone County held a five days encampment at the station under the direction of the County Agent and the Home Demonstration Agent. About fifty club members were present.

Director F. B. Linfield of the Montana station was a visitor during the week.

Newlands.

During the period ending July 2 the highest temperature recorded was 94, the lowest 48, and precipitation 0.

During the period ending July 9, the highest temperature recorded was 99, the lowest 38, and precipitation 0.

During the period ending July 16 the highest temperature recorded was 101, lowest 47, and precipitation 0.

Iron sulfate, was applied at varying rates of 1, 2, 4, and 6 tons per acre to small plats of cement soil on Field B. Corn was then planted as the indicator crop. An untreated check plat was left between each of the treated plats. The area of each plat was 12 x 48 feet. After the first irrigation it was apparent that the iron sulfate was effective in preventing the crusting of the soil.

The second crop of sweet clover was plowed under in Field G. The soil of this field carried black alkali and it is impervious and hard to work. A fairly good stand of sweet clover was obtained over most of the area and it is believed that the plowing under of this heavy crop will result in apparent improvement.

The sugar beets in all fields have received their final thinning. The disease of beets known as "curly-top" has appeared on the project, this year and some of the fields have been abandoned. This disease has not affected the beets of the project since 1911 which was the first year of operation of the sugar factory. The yield was so greatly reduced that few farmers would





Newlands (continued).

sign up to grow beets in 1912 and the result was that the factory was operated at a loss and went into the receiver's hands. The factory has been idle for several years and has started this year under a new company. The prospects are again discouraging because of the striking of the curly top disease for the second time during the first year of operation.

San Antonio

During the week ending July 16 the maximum temperature was 98, minimum 70, greatest daily range 28, and precipitation .76 inch. The precipitation occurred on two successive days and in the form of local showers.

Late planted cotton on fields B4, C3 and C6 were cultivated. Row-planted sorghum on the rotation fields, from which the first crop of hay had been harvested was cultivated. Harvesting of sorghum varieties on fields C4 and C5 was continued. The planting of Dwarf milo and Darso sorghums made June 20 on field C4 in the "time-of-planting" test was thinned July 14.

Johnson grass on fields ABC-7 was mowed to prevent its ripening seed and a large proportion of the clip, being free of other weeds, will be saved for hay.

Scottsbluff.

The week ending July 16 was very hot and dry. The maximum temperature was 94, minimum 55, and precipitation 0.

There have been a few local rains but none at the experiment farm. Many fields on the project are suffering from a lack of water. Each 80-acre farm is now allowed 1-1/2 second feet of water three days out of seven. With so little water it is impossible to get over large fields of grain and alfalfa and, as a consequence, many of these fields are suffering badly.

Beets, corn and potatoes are now in need of water and most of it is being used on these crops rather than try to irrigate grain and alfalfa. The beets, corn, potatoes and alfalfa plats in field K have been irrigated during the past week. All crops look good where there is sufficient moisture.

Yuma.

The maximum temperature for the week ending July 16 was 106, minimum 75, greatest daily range 28, and precipitation .03 inch.

Although the daily temperatures recorded have been about normal for this time of year, several days of cloudy weather with rains in the foot-hills have caused a period of high humidity.

Alfalfa seed threshing is well under way on the project. While the yields reported are better than last year, the price offered for the seed is exceptionally low. Sales that have been made range from 12 cents to 14 cents per pound with hardly any distinction as yet in price between the Chilian (common), Hairy, and Smooth Peruvian types.



Yuma (continued).

A critical situation developed on the project during the flood stage of the Colorado river, a break in the levee occurring at the seventeen mile post on the Arizona side of the river between Yuma and Somerton. Although the crest of the flood was reached on June 28, with a maximum discharge of 185,700 acre feet, the break on July 1 occurred at a time when the river was falling rapidly. The efficient work of the Reclamation Service and loyal help of the unit holders greatly reduced the amount of land that was flooded. A total of 1500 acres were inundated but from this area the water is being rapidly drawn off.

Demonstrations on Reclamation Projects.Newlands.

The week ending July 2 was one of much activity on the project because of the harvesting of the first crop of alfalfa hay. Labor has been more plentiful this year than for the past three years and the wages have been on an average about 50 per cent of last year's wages. Two dollars to two dollars and fifty cents per day has been the prevailing wage. Farm bureau centers for this county and the adjacent county in which a part of the project is located decided upon a maximum wage of \$2.00 per day for hay hands, but were unable to maintain this scale, because a number of the members making the agreement saw fit to ignore it. This has been the experience of farm bureau organizations endeavoring to fix the wage scale in this section for some time. This situation has always caused considerable annoyance until the maximum wage scale is finally settled upon.

Considerable time was taken up in connection with the securing of data on the cost of growing alfalfa hay this year on the project.

One article was contributed to the local paper reporting herd testing results for the month and making comparisons with reports from other herd testing associations.

During the week there were 29 calls for assistance and three visits to farms were made.

During the time beginning July 2 until July 12 inclusive, the time was spent away from the project in a trip by auto to Fresno, California, for the purpose of delivering the Ford ambulance, which was loaned to the office by the Bureau of Public Roads, and to exchange the same for a Ford runabout which has been stationed at Bard, California. The trip was made without any difficulty. In connection with this trip for transferring automobiles, occasion was taken to observe agricultural conditions enroute with special reference to the possible demand for alfalfa hay by California farmers. Because of the very wet weather through most of California last year the Coast Range mountains and the Sierra Nevada mountains which supply most of the grazing show a very heavy growth of grasses and wild oat hay was harvested to a greater extent than for several years. At this time of the year the nonirrigated country is completely dried up as is invariably the case during this season, but the stock on the range look to be in good condition. There seems to be ample feed to





Newlands ( continued)

carry the cattle when the pastures are exhausted. Considerable alfalfa hay was left over in some sections from last year, and there seemed to be a good crop in the irrigated sections this year, while the non-irrigated fields showed a very poor growth due to lack of moisture. On the whole, however, the prospects for a demand for alfalfa hay from the outside does not seem at all promising. Ten dollars per ton was being offered for alfalfa hay on board boats along the Sacramento river. At these prices it is next to impossible to put our hay on the market and get cost of production out of it.

In addition to the discouraging marketing situation caused by good crops in California, the situation is further complicated by the California people endeavoring to discourage shipments from this state on account of the presence of alfalfa weevil in a small area of Washoe County of this state. A movement toward quarantining this state against shipping hay into California is, no doubt, contemplated. Repeated inspections have been made in sections of this state outside of the small infested area in Washoe county and no weevil has been found. Every effort is being made by this office and the farm bureau to offset the activities of the California hay dealers in quarantining the alfalfa hay from this project from entering the California markets.

During the four days on the project there were received 28 calls for assistance and 8 visits were made to farms.

Milk River.

During the week ending July 16, 13 farms visits were made, one Farm Bureau meeting and field demonstration was attended, and 4 calls for assistance were received. Farm ditches were laid out on 80 acres and about 300 acres were examined for alfalfa seed prospects.

Meteorological data were recorded as follows: maximum temperature 88, minimum 56, and precipitation 1.54 inches.

Plans were made during the week to hold an irrigation meeting and field demonstration at Malta August 15. The demonstration will be conducted in cooperation with the county agent of Phillips county and Mr. Blaine Ferguson, irrigation specialist from the Montana Extension Department.

A conference with the county fair committee of Valley County was also held during the week relative to exhibiting a miniature irrigation farm at Valley county fair the latter part of August but no definite action was taken.

No water was delivered to farms on the project during the week and present indications are that very little water will be delivered for irrigation during the remainder of the season. Second crop alfalfa will be ready to cut the latter part of next week but considerable acreage of the first crop is still standing in the hope of producing seed. Abundant rainfall, however, has interfered with the pollination of the alfalfa and many farmers are beginning to cut the crop for hay.



Sun River.

During the week ending July 16, 10 farm visits were made, the time spent on each farm varying from one hour to one day. One meeting was attended and one article contributed to a local newspaper.

Crops on the project were not seriously damaged by the hail storm which occurred July 12. There was some damage done to the grain crop on the east end of the project near Power and Cordova but the acreage was small. There has been serious damage reported on the dry land north and east of here around Brady and Dutton and in that section an 80 per cent loss is reported.

Harvesting of the crop of alfalfa has been under way for about ten days. A decrease in prices is reported. Hay is selling for \$5 per ton.

A meeting was held July 10 at the Crow school house to further the movement started some time ago to boost for the completion of the Sun River Irrigation Project. Project manager Sanford and several leading business men from Great Falls were among the large number present. It was decided at the meeting to meet the Great Falls Commercial Club July 17 at Great Falls and arrange to send a committee to Washington, D. C.

Mr. W. C. Cook, entomologist from the Montana State College, visited the project Saturday to examine the fields under observation by that department for effect of water on the cutworms. One half day was spent in company with him going over worm infested land. No damage could be detected, where water was applied early.

Uncompahgre.

During the week ending July 9, a rather unusual amount of rain for this season of the year fell. Beginning Sunday night it rained until nearly noon Monday, and some rain fell again Friday and Saturday.

A trip was made over the Forest Reserve adjacent to the project on Friday and Saturday. Feed is still abundant and the rains will keep it in good shape for some time. Cattle are looking fine.

A very interesting tour was held by the Western Slope Purebred Livestock Breeders' Association on Thursday. About 100 persons in 25 automobiles attended, spending the day visiting farms of breeders in Mesa County. Two herds of Duroc-Jerseys and one of Poland Chinas, one of Holsteins, one of Ayrshires, two of milking Shorthorns and five of Jerseys were inspected.

A picnic dinner was provided by the Mesa county breeders on the lawn of T. G. Twyman, Poland China and Jersey breeder, and was followed by a few talks. Four automobiles went from Montrose, making a drive of nearly 190 miles in the day. A tour is provided for each year by the by-laws of the association, to be held alternately in the three counties of Mesa, Delta, and Montrose. This is the first tour held, none being attempted last year.





Uncompahgre (continued).

One of the few herds of purebred dairy herds on the project, a herd of Holsteins, has just been offered for sale. Several men were visited during the week in an effort to interest some of them in these cows. One of them visited the herd but has not bought anything as yet. He likes the cows but lacks the price.

White grubs, larvae of the common "June bug" or May beetle, have appeared in considerable numbers in a few places, infesting grass land and doing some damage by burrowing just under the surface and causing the grass to die. Probably the infestation will not prove general enough to be serious.

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# WEEKLY BULLETIN

Of the Offices of

## WESTERN IRRIGATION AGRICULTURE. and DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XIX.

July 30, 1921.

No. 5

### Western Irrigation Agriculture.

#### Huntley.

The chief field operations for the week ending July 23 on fields K and L-IV, were ditching of potatoes and beets, poisoning of grasshoppers, harvesting of the second crop of alfalfa, and the irrigation of alfalfa.

The yields of alfalfa taken from fields K and L-IV are given in the following table:

Plat Number.	Rotation No.	Pounds, per plat	Tons per acre
K-II-5 .....	67	700	1.40
K-III-5 .....	61	870	1.74
K-III-6 .....	61	695	1.39
K-III-11 .....	60	750	1.50
K-III-12 .....	60	600	1.20
K-IV-1 .....	40	720	1.44
K-IV-7 .....	42	770	1.54
K-IV-11 .....	42	530	1.06
K-IV-14 .....	44	610	1.22
K-IV-22 .....	8a	750	1.50
K-I-Tri .....	..	2090	1.48
K-II-tri .....	..	1640	.97
K-III-Tri .....	..	1800	1.13
L-IV-10 .....	46	490	.98
L-IV-13 .....	46	480	.96
L-IV-14 .....	8a	560	1.12
L-IV-17 .....	64	530	1.06
L-IV-18 .....	64	540	1.08
L-IV-19 .....	64	400	.80
L-IV-25 .....	69	600	1.20
L-IV-26 .....	69	530	1.06
L-IV-Tri .....	..	1570	....

#### Yields of Spring Seeded Alfalfa in Field K

K-II-4 .....	67	500	1.00
K-III-4 .....	61	590	1.18
K-III-10 .....	60	282	.56
K-IV-4 .....	40	410	.82
K-IV-10 .....	42	290	.58





San Antonio.

During the week ending July 23, the maximum temperature recorded was 100, minimum 66, and greatest daily range 34. There was no precipitation.

Practically all cotton plantings on the station have made sufficient growth to keep the ground well shaded throughout the entire day and, notwithstanding the prevailing dry weather and high temperature, the development of cotton boll weevils appears not to have been noticeably checked.

Fields C3 south of the pomegranate planting and the south two-thirds of D3, were plowed to an average depth of 10 inches. A good yield of Johnson grass hay was harvested from these fields previous to their being plowed.

The larger offshoots were removed from all date palms in orchard E3.

The remaining varieties in the sorghum variety test on fields C4 and C5 were harvested. The earliest of these varieties to mature, and all milo from the rotation plats, was threshed. Yields of grain and stover from the latter are given in the following table:



San Antonio (continued).

Yields of Dwarf milo Harvested from Rotation and Tillage Plats,  
San Antonio Experiment Farm, 1921.

Plat No.	Crop sequence and tillage practice.	Yield per plat		Yield, per acre*	
		Grain	Stover	Grain	Stover
		Pounds	Pounds	Bushel	Tons
A4-12	Milo; field peas-Plow spring. Sorghum (drilled) - Plow November Cotton, Plow Fall Oats for grain - Plow June	409	835	27.3	1.67
A4-16	Same as above except Field peas are harvested for hay.....	438	740	29.2	1.48
A5-3	Milo, Plow July Oats for hay, P. June ..... Cotton, Plow November	384	615	25.6	1.23
A5-6	Same as above except manure applied after cotton	458	680	30.5	1.36
A5-9	Milo, Plow July Cotton, Plow Fall Oats for grain, Plow June Cotton, Plow November	508	495	33.9	.89
A5-13	Milo, Manure, Plow July Cotton, Plow Fall Oats, grain; Cowpeas, P. Fall Cotton, Plow November	399	860	26.6	1.72
A5-17	Same as A5-13 except subsoiling practiced in connection with plowing after Milo and Cowpeas	472	710	31.5	1.42
A6-1	Milo, continuously, Plow July	380	595	25.3	1.19
A6-2	Milo; manure, continuously, Plow July	616	785	41.1	1.57
A6-6	Milo, P. July Oats for hay, Plow May	390	750	26.0	1.50
A6-14	Milo, Plow Fall Corn, Plow July	414	845	27.6	1.69
B4-14	Milo, Plow July Sudan grass, Plow November Cotton, Plow November	375	625	25.0	1.25
B4-17	Milo, Plow July Oats for hay; F. Peas, Plow Spring Cotton, Plow November	555	875	37.0	1.75
B5-18	Milo, Plow July	377	605	25.1	1.21
Maximum .....		616	875	41.1	1.75
Minimum .....		375	495	25.0	.89
Average .....		438	715	29.4	1.42

\* Grain and leaves were thoroughly cured but the stalks still contained a small percentage of moisture.

The milo was harvested with corn binder and entire bundles run through the separator.





Scottsbluff.

The weather during the two weeks ending July 30 was hot and dry. A rain of .55 inch on July 26 and one of .08 inch on July 28, together with one-half inch which came in a number of small showers, is the only rainfall we have had since the middle of June. This lack of rain, together with the shortage of irrigation water, will cut down the yield of small grain and alfalfa.

Most of the small grain has been cut and the second cutting of alfalfa is now under way. Most of the cultivated crops are looking fairly well. Many acres of beets, however, were very late in being thinned, which will cut down the tonnage materially.

At the experiment farm all the small grain has been cut. The second cutting of alfalfa has also been cut and bunched. It will be stacked next week.

Yuma.

The maximum temperature for the week ending July 30, was 105, minimum 72, greatest daily range 33, and precipitation 0 inch.

Although higher temperatures than normal have been reported from nearly all other sections of the country, the records at this station for July show the mean temperature to be 88.85, while the average for 11 years is 88.1. A ten-day period of partially cloudy weather with winds and some rains in the adjacent districts has helped to lower the temperature somewhat as compared with the same period last year. The maximum temperature recorded so far this year is 109, but periods of high humidities have checked any relief to be derived from this departure from the normally higher temperatures. The past month has been especially hard on work stock. At least a dozen cases of death caused by over-heating have been reported.

The alfalfa seed harvest on the project continues in full swing. The yields secured seem to be about the average for past years but the price still remains very much depressed with the market uncertain. At the present time the demand for common alfalfa seed seems to be holding down the price of the Peruvian types. However, as the season advances it seems likely that more attention will be given to the latter, especially the seed which has been certified.

At this time of the year the usual shedding of squares and young cotton bolls takes place but in general the crop is growing quite normally.

Some of the grain sorghums planted in April and forepart of May are now heading. The injury by birds in these fields, however, is quite serious.

Station work performed during the week consisted of disking, harrowing and planting Black Eye Cowpeas in plat variation test C-32 to 35; plowing nursery plats A14-1 and 2; cultivating cotton B17 and E2; harvesting alfalfa A1 to 8; painting and repairing buildings, and general hoeing, irrigating and cultivating.





Demonstrations on Reclamation Projects.Milk River.

During the week ending July 23, eight farms were visited and five calls for assistance were received. Irrigation systems were planned on 120 acres, and odd ditches were layed out on 40 acres. About 450 acres were examined, by request, for general information. Weather records for the week were as follows: maximum temperature 102, minimum 53, and precipitation none.

A small number of farmers have called for water during the week and a little irrigation has been done on second crop and new alfalfa but a good many farmers are still busy with their first crop and the blue-joint hay. Harvest of early wheat also began during the week, and, in some cases, farmers have decided to postpone irrigation because of so much work in connection with grain harvest.

Considerable acreage of first crop alfalfa which had been left for seed was cut during the week. Only a small acreage now shows possibilities of a paying seed crop and an effort was made during the week to advise farmers to cut the crop for hay in time to get a second cutting rather than lose both cuttings waiting for it to seed when indications are so unfavorable.

Newlands

During the week ending June 23 the attention of this office was called to the presence on one of the ranches of a variety of clover, which seems to be different from any other varieties described in seed catalogues and other references. Attention was attracted to the clover because of the fact that it was growing in a low water-logged alkaline soil and was crowding out what had been a dense growth of salt grass. This variety of clover resembles very closely the White Dutch in general appearance. The leaves, however, are narrow and solid dark green in color, resembling more nearly small alfalfa leaves. The blossom is much like white clover except that it is not all white but has an outer fringe of scarlet flowers. The plant forms a very dense growth on the ground much the same as White Dutch clover. This clover plant is no doubt a wild variety that has been carried to this place by winds or birds. It could not have been brought in the irrigation water as the ground has never been irrigated. This patch of clover, which now covers about ten feet square, was first noticed about two years ago and at that time covered a place only about one foot square. The pasture in which the clover is growing has been heavily grazed so that these clover plants could not go to seed, but in spite of this the patch has spread rapidly by underground root stocks, resembling very closely the method of propogation of salt grass. This clover plant has made a very dense sod and has crowded out the salt grass in the area to which it has spread.

Because of the fact that this clover plant seems to thrive in heavy alkaline soil, which in this case had salts crystalized on the surface and in which the water table was only from six to eight inches from the surface, it was thought that this clover plant might prove to be of value to the project for pasturing purposes on sub-irrigated land where water table is too high for other crops.





Newlands (continued).

In order to study further the merits of this clover plant, the area in which it is now growing was securely fenced to protect it from cattle and jack rabbits. This will allow the clover to bloom and produce seed, which can be used to propagate the plant on a more extensive scale.

Much of the past week was devoted to herd testing and in conferences relative to general herd management. Some attention is now being given to livestock exhibits at the local county fair. This office will devote considerable time to this feature of the county fair. During the past week 23 calls for assistance were received and nine visits to farms were made.

Sun River.

During the week ending July 23, ten farm visits were made, the time spent on each farm varying from one hour to one day. Eight office calls were received and one meeting was attended.

Besides the regular work relating to irrigation problems, considerable time during the past week was spent examining alfalfa fields to determine the advisability of keeping it for a seed crop. Most of the fields that were examined have and are being seriously damaged by grasshopper infestation. With the exception of two fields, owners were advised to cut the crop for hay. Alfalfa hay is selling for \$5 per ton in the stack. This is considered a poor price for it and is the chief reason why a large acreage has been left for a seed crop.

No water has been delivered on the Greensfield Division this week. The main canal broke Monday and the entire week was required to put it in operating condition again. The greater part of the grain crop had received two irrigations previous to the time water was turned out and no serious loss will result from lack of water this year.

The writer was one of the committee from the farmers organization from the second bench who met the committee from the Great Falls Commercial Club Sunday July 17. At the meeting, Ex-Mayor Newman and County Attorney Bennett were chosen to represent the bench farmers in their plea for the completion of the second unit.

Uncompahgre.

A visit was made on Tuesday of the week ending July 16 to the farm near Delta where a herd of purebred Holsteins is being offered for sale and several other calls were made in an effort to find someone interested in the cows. The best cows in the herd are offered for \$150 each, which seems cheap enough but no one was found who had the money to buy with

Two men visited signified their intention of seeding pasture later this year. One of them will seed with oats on potato land after the potato crop is taken off. Two men were visited regarding alfalfa-cost data.

One afternoon was spent with the Ash Mesa Pig club boys in stock-judging practice.

Mr. Cooley visited the project from Wednesday noon until Friday evening.

Saturday, Mr. King, the Montrose county agent; Mr. Baldwin, San Miguel county agent, and the writer left Montrose for Fort Collins, by auto, to attend a week's conference of County Agents and Extension workers.





## WEEKLY BULLETIN

Of the Offices of

WESTERN IRRIGATION AGRICULTURE  
and  
DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

August 6, 1921.

No. 6

Western Irrigation Agriculture.San Antonio.

During the week ending July 30 the following meteorological data were recorded: maximum temperature 99, minimum 68, greatest daily range 31, and precipitation .01 inch. Two days were clear, four were partly cloudy and one day was cloudy. The entire rainfall for July, 1.40 inches, came in small, widely separated showers, which were followed by bright, hot, windy weather and was of no practical value to vegetation.

Sorghum plats B4-12, 13 and B5-6, and Sudan grass plats A6-13 and B4-15 were mowed for their second crop of the season. The first three named plats are cropped continuously to Surac sorghum planted in 8" drills. This cutting from B4-12, however, contains not more than 2 per cent sorghum, the remainder being Johnson grass; while the two other plats are practically 100 per cent Johnson grass. The first crop of sorghum planted in 4.1 foot rows became thoroughly cured and was hauled in from the plats, where it has been standing in "bundle" shocks since it was harvested, June 23.

The following table gives the yields of air dry feed obtained from the first crop of both row-planted and drilled sorghum, and of Sudan grass:

Plat Number.	Date of harvest	Per cent Johnson grass	Yield, air dry feed	
			per plat	per acre
		Estimated.	Pounds	Tons
		Sorghum planted in 4.1 foot rows.		
A4-9.....	June 23	0	1100	2.20
A6-4.....	" 23	0	970	1.94
B5-5.....	" 23	0	1140	2.28
B5-10.....	" 23	0	1350	2.70
B5-14.....	" 23	0	1510	3.02
		Sorghum broadcasted in 8" drills		
A4-13.....	June 7	0	895	1.79
A4-17.....	" 7	0	1160	2.32
B4-12.....	" 1	80	1225	2.45
B4-13.....	" 1	90	990	1.98
B5-6.....	" 1	80	440	.88
B5-12.....	" 7	10	890	1.78
B5-16.....	" 7	5	1365	2.73
		Sudan grass broadcasted in 8" drills.		
A6-13.....	June 11	0	1340	2.68
B4-15.....	" 11	0	970	1.94





San Antonio (continued).

Harvesting of corn from the rotation plats was begun.

Plowing and manuring of milo plats in the rotation fields was begun. Orchards A1, B3, and E3 were disked to kill weeds. All field roads in fields A, B, and C were disked for weed control.

Demonstrations on Reclamation Projects.Milk River.

During the week ending July 30, eight farm visits were made and six calls for assistance were received. One meeting was attended and general irrigation help was given on about 200 acres. The time spent on each farm varied from one hour to one-half day. The weather records for the week were as follows: maximum temperature 85, minimum 47, and precipitation .69 inch.

Help given to farmers on the project during the week consisted largely of advise and recommendation with reference to the irrigation and handling of young alfalfa. A light irrigation was recommended in most cases together with clipping the crop especially where a nurse crop is being grown. Most of the farmers have found that sufficient rainfall has occurred to keep the crop growing up to the present time but a few days of hot winds and the removal of the nurse crop has caused the soil to dry rapidly and consequently the alfalfa is beginning to show need of water.

One day was spent during the week at the State experiment Farm at Assiniboine in company with 18 farmers and the county agent of Phillips county. A meeting was held in the afternoon and Mr. George Morgan gave a lecture on summer-fallow and crop rotation.

By request of the project manager, personal attention has been given during the week to the preparation of the Reclamation office grounds for the seeding of lawn and setting out trees at Saco and Vandalia dam. The soil on the grounds at Saco is heavy gumbo and is, therefore, not conducive to the growing of lawn grasses so that it is expected that considerable preparation and careful handling will be necessary to start a crop at that point.

Mr. N. A. Olsen from the Bureau of Farm Management was a visitor on the project during the week.

Newlands.

During the week ending July 30 much time was devoted to herd testing work. Because of the agriculturist's absence from the project the first part of the month the regular herd testing work was necessarily crowded into the last two weeks of the month. The efforts of this office in this connection seems to be securing the desired results in that considerably more interest is being stimulated in herd testing. About 50 per cent more animals will have been tested in July than in any previous month. The reports of this work are given through the local papers and have brought considerable comment among local dairymen and prospective dairymen. It is the purpose of this office to use the herd testing work which is carried on each month to demonstrate the advisability of more extensive dairy development on the project.





Newlands (continued)

Sometime was devoted during the past week to securing photographs on two of the dairy ranches of the project. One of these views was of a group of nine registered Holstein cows on Mr. Long's ranch. This group of cows is of interest in that they have official records showing an average production for the nine animals of 100 pounds of milk per day. Other views were taken on another dairy ranch where the corral, feeding and milking accommodations might well serve as a model for this locality. These views will be used in publicity work for the purpose of advancing dairy interests locally.

Sun River.

During the week ending July 30, 28 farm visits were made, the time spent on each farm varying from a few minutes to one day. Eleven calls for assistance were received and one article was written for the local paper.

Warm, clear days and cool nights during the week has been ideal weather for maturing grain. Early seeding will be ready to harvest in about two weeks. All indications point to the largest acre yield in the history of the project.

The week was given over to assisting farmers with irrigation problems, inspecting alfalfa fields to determine advisability of leaving for a seed crop, and making an inspection of potatoes planted by the boys' potato club.

Mr. H. M. Jennison, who is in charge of seed certification for the state, visited the project during the week to inspect certified seed plots where farmers had applied for seed certification. He requested the writer to take full charge of the potato club which, up to date, has been neglected.

Several farmers have called regarding the possibility of installing a wagon scale. The plan is to place them near the elevators and use them to check on scales used by the elevator companies. Some time will be spent the coming week notifying farmers and ascertaining if a large enough number of them are interested to justify the expense of purchasing them and paying a man to operate them during the grain hauling season.

Uncompahgre.

The entire week ending July 23 was spent in attendance at the Extension Service conference at the State Agricultural College. All of the county agents in the State were present as well as the members of the Extension Staff, Experiment Station Staff, and College instructors. The program covered all phases of field work, sessions being in charge of various specialists. Dr. Thomas Nixon Carver of the Chair of Political Economy, Harvard University, delivered two lectures daily from Monday to Friday, inclusive, on subject related to agricultural economics. The last session of the conference was held on Saturday at Estes Park where President Lory of the State Agricultural College entertained the members of the conference at his cottage. The conference was very harmonious and satisfactory throughout. The recent Memorandum of Understanding between the States Relation Service and the American Farm Bureau Federation was endorsed by the conference.





W E E K L Y   B U L L E T I N

Of the Offices of

WESTERN IRRIGATION AGRICULTURE  
and  
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Vol. XIX

August 13, 1921.

No. 7

Western Irrigation Agriculture.

Huntley

The maximum temperature for the week ending was 93, minimum 44, and precipitation .10 inch.

Cutting of grains in the dry land plats and of barley in fields B-II and B-III was completed during the week. Other station work consisted of irrigating and weeding.

Alfalfa, irrigated pastures and late crops on the project are being damaged rather seriously by grasshopper invasion, and the second cutting of hay will be short from this cause. The entire seasons production of alfalfa will not be more than enough for local use. The most serious damage from grasshopper invasion in this county has occurred on the dry lands north of the Yellowstone river, where in many sections there is complete crop failure.

Yields of dry land grains locally are reported to be much less than expected, since the grain is not filled properly due to extreme heat and drought at the time of maturing.

Irrigated Rotations

Work for the past week on the irrigated rotations consisted largely of the irrigation of beets, potatoes and alfalfa. The alfalfa was not especially in need of water but grasshoppers were so numerous that it was thought necessary to keep it wet and growing good. Several of the riper oats plats in Field K were cut. The continuous flax plat KIII-16 was also cut. All of the cultivated crops and the alfalfa are in excellent growing condition.

Results of pasturing alfalfa with fall pigs in the irrigated rotations are shown in the following tables:



Huntley (continued).Pasturing Alfalfa, Spring Period, Rotation 67, Field K.

Item	Number of Hog.				Total	Avg.
	27	30	63	18		
Sex.....	Barrow	Barrow	Gilt	Barrow		
Pasture period.....	5/25- 7/21	5/25- 7/21	5/25- 7/21	5/25- 7/21		
Number of days.....	57	57	57	57		
Initial weight.....pounds.	127	135	137	128	527	
Final weight..... do...	178	193	189	179	739	
Total gain..... do...	51	58	52	51	212	
Average daily gain... do ..	.89	1.02	.91	.89		.93
Net return per acre.....					\$30.24	
Amount grain fed....pounds.					728	
Pounds grain per pound gain						3.43

Pasturing Alfalfa, Spring Period, Rotation 69, Field L-IV.

Item	Number of Hog.				Total	Avg.
	65	11	14	12		
Sex.....	Gilt	Barrow	Gilt	Barrow		
Pasture period.....	5/25- 7/21	5/25- 7/21	5/25- 7/21	5/25- 7/21		
Number of days.....	57	57	57	57		
Initial weight.....pounds	136	140	135	123	534	
Final weight..... do	190	192	184	167	733	
Total gain..... do	54	52	49	44	199	
Average daily gain... do	.95	.91	.36	.77		.87
Amount grain fed..... do					728	
Net return per acre.....					\$26.60	
Pounds grain per pound gain						3.65

San Antonio.

During the week ending August 6 the following meteorological data were recorded: maximum temperature 102, minimum 68, greatest daily range 32, and precipitation 0.0.

Harvesting of corn from the rotation plats was completed and harvesting of the row spacing corn test was begun. The yields from the rotation plats, which will be reported as soon as samples taken have reached a crib-dry condition, are very low and the quality of the grain is poor, due to severe drought and hot weather during the pollen shedding period.





Demonstrations on Reclamation Projects.Milk River.

During the week ending August 6, two farm visits were made and four calls for assistance were received. The maximum temperature was 89, minimum 41, and greatest daily range 34. A precipitation of .01 inch was recorded.

The entire week was given over to the preparation of a miniature irrigation farm for exhibition at the Valley County fair, which is scheduled for the last three days of the month. Different irrigation methods are to be worked out on the farm in miniature, together with a crop rotation scheme and the location of farmstead buildings. Seeds were planted on the different plats during the week and it is intended to make the exhibit with growing crops and by running water in the main canal and field ditches.

The fair association, farmers on the project, and the Chamber of Commerce at Glasgow, are very much interested in this demonstration and are giving the writer all the help that is needed. The project manager is also anxious to make this exhibit worth while and has made necessary funds available from his office for the construction of it.

During the week ending August 13, five farm visits were made and three calls for assistance were received. The maximum temperature was 91, minimum +5, and precipitation 0. The majority of the time during the week was spent in preparing a miniature farm for exhibition at the Phillips county fair.

The necessary equipment and labor to construct the exhibit was furnished by the Reclamation Service. The fair association and farmers of Phillips county are showing considerable interest in this work and gave hearty cooperation in helping to get it started.

Threshing commenced on the project during the week and wheat yields are reported from 15 to 25 bushels per acre. One field of oats was threshed with a yield of 60 bushels per acre.

About 120 acres of alfalfa were examined during the week for Mr. Brown and Mr. Brooke at Saco, and on parts of the field plants were beginning to fire. Fall irrigation was recommended in order to produce as vigorous a growth as possible to insure the crop against winter killing.

Alfalfa was sown on part of the Reclamation office grounds at Saco the first of the week and followed by light irrigation. The seeds had begun to sprout yesterday and most of them were showing growth of two leaves above the ground.

Shoshone.

During the week ending August 6, thirteen farm visits were made and two meetings attended.

The weather was cooler than during the preceding week. On a few farms the second crop of hay was cut, and also a few fields of grain. The first cutting was heavy, but the second will not be up to the average.

On August 1, clips from all farm flocks were still in the hands of the growers and, in some cases, last years' clip had not been disposed of.





Shoshone(continued).

Buyers had all left this part of the State in June, the growers having neglected to get together or collect the wool. During the forepart of the week, under the auspices of the Powell Farmers Exchange and with the assistance of the Agriculturist, wool from 27 farms was collected and consigned to Adams and Leland, Boston, Massachusetts the grower receiving an advance of 10 cents a pound.

The evening of August 2 was spent at a community meeting between Frannie and Deaver. After a talk by the Agriculturist many questions were asked by those present about matters pertaining to cows and dairying. It was evident that a number think it advisable for them to milk more cows but there are now two obstacles in the way. It is a new community comparatively, and a part of the settlers have already stretched their credit almost beyond the point of safety for creditors and the remainder may find it difficult to secure financial assistance at this time on account of the condition of local banks. The second obstacle is a lack of water for use during the winter.

In a few localities grasshoppers have been doing some damage, chiefly to gardens, late grain, and young alfalfa. Most of Saturday was spent viewing fields and consulting with owners living about half way between Deaver and Powell. It was thought by some that the insects were decreasing in number because of cool nights, therefore, poisoning is not to be undertaken for a few days.

Sun River.

During the week ending August 6, 13 farm visits were made, the time spent on each farm varying from a few minutes to one day, one meeting was attended and one newspaper article was written.

Hot days and cool nights featured weather conditions during the week. No moisture was precipitated on the project during the week. Heavy grain was blown down on a comparatively small acreage near Fairfield by a strong wind which occurred Thursday.

Project farmers have been busy repairing their granaries and binders in preparation for harvest which will begin in about ten days.

Irrigation was carried on upon a small scale during the week. A few deliveries were made for gardens and young alfalfa. This practically finished the irrigation season on the Greensfields division. Water was turned out at the head works and will be out until next month.

About twenty farmers were visited during the week to ascertain if a sufficient number were interested to warrant installing a wagon scale. Without exception they favored the movement but the banks were unable to furnish them with money and, as a result, it will be temporarily abandoned.

In compliance with a request from the Entomology Department of the Montana Experiment Station, a survey was made of worm-infested fields which were under observation and a report was made on cultural methods used, time water was applied, damage done, and the opinion of farmers about water as a control measure.





Uncompahgre

The first part of the week ending July 30 was taken up with the return trip from Fort Collins, a delay of half a day being caused at Salida for auto repairs. A series of cloudbursts on the Eastern Slope has caused a great deal of damage to roads. On bad washout was encountered, but the entire trip of 700 miles, going and returning, was made without any serious difficulty.

One afternoon was spent with Dr. Griffith, local veterinarian, in caponizing chickens. Dr. Griffith is quite enthusiastic over the possibility of establishing a trade in capons with western coast cities, and, to encourage the practice of caponizing, is offering to operate on any birds brought to his place. He is a breeder of purebred Buff Orpington and caponizing most of his cockrels.

The herd of purebred Holsteins offered for sale at Delta has not yet been sold. Mr. Nash of Montrose was taken to see it this week and thinks of buying it if he can get the money. The herd, consisting of four mature cows, one two-year old heifer, one yearling heifer, two heifer calves, and a two-year old bull, all well bred stuff, is priced at \$1050.00. A number of men have talked of buying the herd but say they are not in a position to do so. The price seems very low compared with prices asked and paid for grade cows within the past few months, and the fact that the herd has not sold is a good indication of the financial situation on the project.

An interesting meeting, called by the boys' and girls' clubs of Uncompahgre, was attended Thursday night. Demonstrations were given by members of the canning and sewing clubs and a pig club member explained the work of the livestock clubs and the stock-judging work. About 60 persons were present.



# W E E K L Y   B U L L E T I N

Of the Offices of

## WESTERN IRRIGATION AGRICULTURE and DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XIX

August 20, 1921.

No. 8

### Western Irrigation Agriculture.

#### Newlands.

During the period ending July 23 the highest temperature recorded was 101, the lowest 53, precipitation a trace.

During the period ending July 30 the highest temperature recorded was 98, the lowest 46, precipitation .01 inch.

During the period ending August 6 the highest temperature recorded was 98, lowest 51, and precipitation .10 inch.

During the period ending August 13 the highest temperature recorded was 99, lowest 51, and precipitation 0.

The second crop of alfalfa hay was cut July 22-26 and stacked the following week. The wheat and barley plats were threshed during the week ending August 6. Plats E3 and E6, manured every two years, showed a marked increase in yield over the adjacent unmanured plats E4 and E5.

#### San Antonio.

Dry, hot weather with an almost steady south-south-east wind, varying in intensity from a general breeze to a 30-mile per hour wind, has prevailed since the middle of July. During the week ending August 13 the following meteorological data were recorded: maximum 101, minimum 69, greatest daily range 30, and precipitation 0. Five days were recorded as clear and 2 days as cloudy.

An offshoot propagation shelter was constructed just south of the greenhouse and the process of rooting the offshoots pruned from the trees in orchard E3 was started.

Corn was harvested from the plantings made for the Office of Corn Investigations on Fields A1, B3 and F3; also from the Row-Spacing test on field C5. Stalks on the rotation corn plats and on fields B3 and F3 were cut and plowing of the rotation corn plats was begun.

The first picking of cotton was made from the four plats continuously cropped to cotton; the yields from live plants and that from plants which had died from rootrot were kept separate in an attempt to make a dependable estimate of the decrease in yield caused by a given per cent loss of plants from this disease.

The first picking was also made from the Kekchi breeding block and spacing test on the Herbst farm.

The last of the grain sorghums to mature in the sorghum variety test on fields C4 and C5 were threshed.





Demonstrations on Reclamation Projects.Newlands.

During the week ending August 6 visits were made to seven farms and twenty-two calls for assistance were received.

On Friday of this week a representative from the Northern California Hay Growers' Association visited the project for the purpose of buying 500 to 1000 tons of alfalfa hay. This hay was to have been made a part of a cargo shipment of hay around the Panama Canal to New York City. This exportation of hay from California and Nevada points is calculated to strengthen the market. While Nevada hay growers have no connection with the California Association they consider it advisable to take some of the surplus from this section in order that our market might be strengthened and at the same time hold our hay from a California market as much as possible. The plan was not readily received at Fallon, the price of \$3.60 per ton on board cars being considered too low. However, one large grower plans to participate in the exportation scheme. Perhaps other may do so when the next boat load is made up. If the exportation plan works out satisfactorily, continued shipments of alfalfa hay will be sent out of the San Francisco port.

Some time was devoted to assisting the representative of the California Association in presenting his proposition to the growers here.

Considerable time was given to two parties desiring to establish foundation dairy herds and to provide barns and corral equipment for them.

During the week ending August 13 considerable time was given to the preparation of two articles for the local papers. These articles contained the report of dairy herd testing done by this office during July. Fifteen herds were tested including 205 animals which was double the number tested for any previous month. This herd testing work and the reports covering it seems to be having a very desirable effect in stimulating herd testing work and attracting attention to the importance of dairying as a profitable means of disposing of alfalfa hay.

One more party has asked this office to locate two car loads of high grade Holstein cows as soon as possible and to this end considerable correspondence has been started. Advertisements have been inserted in papers circulating in dairy communities. It is expected that these animals will be located in another week at which time a trip will be made in company with the purchaser to secure them.

Much time is being devoted to making arrangements for the local county fair, which is to be held in Fallon, September 14, 15 and 16.

Shoshone.

During the week ending August 13, 17 requests for assistance were received and 11 farm visits were made.

A few farmers are still concerned about grasshoppers, but in most places the insects are now doing little damage.

As a result of a farmers' mass meeting held on the 6th., a committee has been working on a plan to market hay collectively. The organization of a hay growers association and a sales agreement are features of the plan the committee will submit to a gathering of hay growers next week.

Mr. A. C. Cooley, Agriculturist in Charge, Demonstrations on Reclamation Projects, visited the Project August 11 and 12. On the 11th. a trip was made to that portion settled last year by Service men. A number of





Shoshone, continued

these settlers were visited, their fields viewed and information obtained about their progress, aims, and problems. Some time was also spent observing the drainage work done by the Reclamation Service, and its effects.

Harvesting grain and putting up the second cutting of hay occupied most farmers during the week. A few fields of grain have been threshed. Some hay can be bought at \$5 in the stack, but most owners are not ready to sell at that price. An offer of 85 cents per cwt. for 100 cars of potatoes has been received through one of the commission men doing business in Powell. The week closed with butterfat at 31 cents per pound.

Sun River.

Most of the time during the week ending August 13 was spent promoting the project fair which is to be held at Fairfield September 9 and 10. By request from the fair committee, trips were made to Choteau and Great Falls to get assistance from business houses of those cities. This is the first time people here have attempted holding a fair and special efforts are being put forth to make it a success.

A meeting and demonstration was held at Sloan on August 10. This meeting was primarily for the Boys Potato Club but about fifteen farmers were in attendance. Cultural methods to be used in producing potatoes were discussed and a demonstration was given on hilling potatoes with a cultivator.

Two heavy showers have delayed grain cutting which is well under way at this writing. A surplus supply of labor will simplify the harvesting and threshing this fall.

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## WEEKLY BULLETIN

Of the Offices of

WESTERN IRRIGATION AGRICULTURE  
and  
DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

August 27, 1921.

No. 9

Western Irrigation AgricultureBelle Fourche.

( No report received ).

Huntley

Threshing of all the grain in the irrigated rotations was completed August 22. Most of the week ending August 27 was spent preparing for the Annual Project Picnic which was held August 27. The potatoes were given their final irrigation. Due to the continued dry weather it was necessary to irrigate the corn for the third time.

Following are the yields of oats, wheat and flax in the rotations:

Plat Number.	Rotation No.	Yield.	
		per plat	per acre
		Pounds	Bushels
<u>OATS</u>			
K-III-2.....	61	646	80.8
-8.....	60	641	80.1
-14.....	31	484	60.5
K-IV- 6.....	25	609	76.0
- 8.....	42	583	73.0
-13.....	44	600	75.0
-16.....	30	470	58.8
-19.....	32	389	48.6
K-V- 1.....	16	531	66.4
- 8.....	22	729	91.1
- 9.....	24	593	74.1
-16.....	23	531	66.4
-17.....	28	387	48.4
-20.....	27	473	59.1
-21.....	1	217	27.1
L-IV- 1.....	1a	326	40.7
- 4.....	34	606	75.8
-8.....	35	585	73.1
-11.....	46	687	85.9
-20.....	64	635	79.4
-27.....	69	684	85.5
<u>WHEAT</u>			
K-II- 7.....	5	280	18.6
- 8.....	7	286	19.0
K-V - 4.....	18	504	33.6
-18.....	28	284	18.9
-23.....	3	221	14.7
<u>Flax</u>			
K-II- 2.....	67	179	12.8
K-III-16.....	9	48	3.4



Newlands.

( No report received ).

San Antonio

( No report received ).

Scottsbluff.

The following was taken from a letter to Mr. Scofield from Mr. Holden, under date of September 3, 1921:

"The weather during the past month has been rather dry and hot. The maximum temperature was 97, minimum 46, and precipitation 1.23 inches. Crops that had sufficient moisture made good growth.

"The potato crop is very promising. The indications are that both yield and prices will be very good. Quite a number of farmers have already dug and marketed their potatoes. The farmers are getting \$1.80 per cwt. on track. The main crop will not be harvested until after the middle of September. Sacks are costing about six cents each. I am herewith sending you a newspaper article on the potato tour on August 17.

"The sugar beets are doing fine. The prospects are good for a high yield. The factories are planning to begin slicing on the 20th of September. This is much earlier than usual. The indications are that there will be plenty of labor at considerably reduced wages to handle the crop. Without a doubt many of the farmers will silo quite a large amount of their beet crop and haul it in themselves later rather than pay a high price for hauling.

"Due to the shortage of water the yield of small grain is low. This is true of both the irrigated land and dry land. The price of small grain is also low. Wheat is selling for about 35 cents per bushel and barley and oats at 70 cents cwt.

"The hay crop will also be short compared with other years. The main reason for this shortage is the fewer acres in alfalfa, due to the fact that a great deal of old alfalfa has been plowed up for other crops, while it has been rather difficult to get a stand of new alfalfa for the past four years because of the damage done by grasshoppers.

"The feeders of the valley are up in the air as to whether to feed or not. Some think the signs look favorable for lamb feeding while most of them are rather skeptical about feeding cattle. Feeders will not cost more than half as much as they did a year ago and the feeds are considerably cheaper. The sugar company is offering pulp and syrup below prewar prices. Dry pulp is now selling at \$15 per ton, syrup \$7.50 per ton, and wet pulp 50 cents per ton. In the past the factories at Gering and Mitchell have dried all their pulp, but neither of them will dry any pulp this year. The Bayard factory is the only one that will dry pulp. The sugar company offered \$7 per ton for hay delivered at the factory, but the farmers rushed it in so fast that the sugar company reduced the price to \$6 per ton. Corn can be laid down here at less than \$1.00 per cwt.





Scottsbluff (continued).

Milk Produced on Pasture, Scottsbluff Experiment  
Farm, during August, 1921.

Name of cow.	Bluegrass pasture, 17 days	Average daily gain	Grain fed	Sweet clover pasture, 14 days.	Average daily gain	Grain fed
	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>
Marie .....	522.5	30.7	136	426.0	30.4	112
Bess.....	699.9	41.2	136	541.7	38.7	112
Goldie .....	407.2	23.9	129	312.3	22.3	112
Sarah .....	429.4	25.2	119	340.3	24.3	98
	<u>14 days</u>			<u>17 days</u>		
Stinnie.....	274.0	19.5	98	307.0	18.0	119
Ellen .....	275.0	19.7	98	338.7	19.9	119
Heifer.....	235.9	16.8	112	276.0	16.2	132
Quality.....	354.6	25.3	112	442.9	26.0	129

Umatilla.

(No report received).

Yuma.

The maximum temperature for the week ending August 27 was 102, minimum 72, greatest daily range 28, and precipitation 1.46 inches.

Since August 5 there was recorded 1.92 inches of rain. This amount fell during four showers and the one on the 5th, 21st and 23rd. were quite heavy. Serious damage to roads and canals in portions of the Salt River Valley and Imperial Valley was reported from the rain of August 23.

Cotton picking has begun on the Yuma Project. One saw gin is running two days a week and the first bale of Egyptian cotton was ginned out at the Somerton roller gin last week. This latter cotton was volunteered. Picking prices have varied from 75 cents to \$1.00 per hundred pounds.

During the forepart of the month excessive shedding of squares and young bolls was reported throughout the valley.

Alfalfaseed harvest is about completed. The average yields are from 250 to 350 pounds per acre. Prices are holding at 13-1/2 to 14-1/2 cents for clean seed. About 35 cars have been shipped out of the valley this season.

Mr. E. Z. Russell, in charge of the Swine Investigations, Bureau of Animal Industry, was a station visitor on August 25.

Mr. H. N. Vinall and Mr. Roland McKee, of the Office of Forage Crop Investigations, visited the station on August 23.





Demonstrations on Reclamation Projects.Minidoka.

(No report received).

Newlands.

During the week ending August 20, visits were made to seven farms and thirty-six calls for assistance were received. Considerable time was devoted to correspondence for the purpose of locating dairy cattle in California. Advertisements were placed in five county seat newspapers in the Northern Sacramento valley, advertising for Holstein cattle. A trip will be made into this section next week and headquarters established at Marysville in which section of the country cattle have already been located. Three parties are desirous of buying 100 head of dairy cattle. Some dairy heifers may be included in this shipment. As soon as suitable animals are located for each party they will be notified to come for the purpose of making the purchase and of returning with the cattle.

Some time has been devoted during the week to herd testing. It was planned to increase the number of herds tested this month considerably over the 15 herds tested last month. This will be interfered with on account of the trip to California selecting dairy cattle.

County Fair matters have taken considerable time. This office will be largely responsible for the dairy features of the fair.

Arrangements were made for the building of a homemade silo on one of the ranches. Final decision was made at the last moment and work will begin at once. It is estimated that the corn will be ready for the silo in about 10 days. A 12 x 20 foot silo will be erected similar to two other silos built on the project. These other two silos have been standing three years and seem to be holding up very well. The construction of these silos is very simple. It consists of 2x6 studding nailed to a double circular plate which in turn is bolted to a cement foundation. The inside circle of this studding is lathed with regular house lathe and put on the same as house lath. Next on the inside of this lathe is nailed inch mesh poultry netting making the circle of the inside of the silo. This lathe and poultry netting is covered with cement plaster in which much fiber is used. On top of this is placed a richer coat of unfibered cement plaster, troweled down to a very smooth surface. For the purpose of further reinforcing the studding three rows of bridging cut from 2x4 lumber is placed between the studding, one at the top, one in the middle, and one at the bottom. The tops of the studding are tied together by a double circular plate similar to the one on which the studding rests. It was planned to lathe and plaster with cement the outside of these silos, but this has never been done and the inside surface of the silos is in good condition. One article illustrated with views was prepared for publication.

Shoshone.

During the week ending August 20, 9 farm visits were made and 21 requests for assistance were received.

During the week attention was given chiefly to two matters; a proposed cooperative shipment of sheep, and the live stock exhibits for the North West Wyoming Fair to be held August 13 to 16. Enough sheep were located to complete a car, W. J. Hall having about half a car. It is now the intention to put them on the Omaha market about the 7th. of September. A few





Shoshone (continued).

owners wish to ship cattle also, but a sufficient number have not yet been listed. Work in connection with the fair necessitated conference with managers and livestock superintendents as well as several visits to farms where good dairy cattle are kept.

The movement to pool hay seems to have died. The consensus of opinion appears to be that it cannot be done successfully without incorporating and too few are in favor of taking that step to make it advisable.

The price of butterfat dropped from 31 cents to 28 cents at the end of the week.

The U. S. Reclamation Service reports having received to date 4600 inquiries about the land opening at Frannie in September. There are 57 units in the tract.

During the week ending August 27, 21 farm visits were made and 23 requests for assistance were received.

The greater part of the time was given to matters connected with the North Western Wyoming Fair, such as assisting farmers in the selection of exhibits and furnishing information about fitting and showing live stock.

One day was spent in the vicinity of Frannie consulting with those who wish to secure dairy cattle. The bank at Frannie will be able to assist a few farmers later and it now appears that the Deaver bank will do the same. Probably a car load of dairy stock can be handled by the two localities together. A car of 3 and 4 year old bred Holstein heifers was recently laid down at Hardin, Mont., for \$95 per head, including all expenses. It is stated that these animals were secured from Wisconsin. Earl Reed, Agricultural Agent for the C. B. & Q. Railroad selected them and the County Agent of Big Horn County, Montana, considers the quality satisfactory.

Uncompahgre.

( No report received ).

Milk River.

During the week ending August 20, 2 farm visits were made, five calls for assistance were received, and one meeting was held. Meteorological data were recorded as follows: maximum 96, minimum 48, and precipitation .41 inch.

An irrigation meeting and field trip was held Monday of the week under the auspices of the writer and the local county agent, and was attended by about 30 people from Malta and vicinity. All project county agents and the State county agent leader were in attendance. The local Reclamation force was represented by the project manager and others and a talk was given by him on the approval of water rental applications and land status on the project. After taking up the question of irrigation methods and economical use of water the meeting was turned over to Dr. F. H. Newell, former director of the Reclamation Service, and Mr. Chas. D. Greenfield, of the Great Northern Railway. These men discussed plans for the colonization of the project with experienced irrigators and farmers.



Milk River (continued).

Part of the week was spent in completing the miniature farm at Glasgow which is to be ready for exhibition at the county fair August 29 to 31.

The latter part of the week was spent with Messrs. C. S. Scofield and A. C. Cooley going over farms and different parts of the project in company with Mr. Geo. E. Stratton, project manager.

Plans were discussed during the week with county agents on the project to locate suitable farms and secure the cooperation of at least one farmer in each community to establish a demonstration plat of a few acres and hold regular irrigation demonstrations next year.

Sun River.

Weather during the week ending August 20 has been cool, especially has this been the case at night. The late grain is in danger of being frosted if this weather continues.

The week has been one of much activity in harvesting grain. Cutting was delayed by two showers, which, while keeping the farmers in suspense for danger of hail, has done no damage to the crops.

Several threshing outfits from dry land sections near here are preparing to operate on the project this fall. This will hasten and simplify this part of fall work.

No field work was done during the week. The time was spent preparing a detailed report of the summer's work and visiting with Mr. A. C. Cooley, Agronomist in Charge of Demonstrations on Reclamation Projects. One day was spent on the Fort Shaw Division in the interest of the Project Fair.

During the week ending August 27, seven farm visits were made, the time spent on each farm varying from a few minutes to one day. Ten calls for assistance were received, and one article was written for the project paper.

Cool weather prevailed throughout the week. Two nights were exceptionally cold but no damage has been reported by frost. It is believed that practically all grain is far enough advanced to prevent material damage by frost.

Harvest of grain has been carried on extensively during the week. Frequent showers have hastened the ripening period. Two threshing crews began work on the east end of the bench in the early part of the week.

Work during the week consisted of finishing up work that was promised and in making preparation to leave the project. The project paper gave a favorable comment on the work carried on during the summer and expressed a wish that a man be placed here next year.





# WEEKLY BULLETIN

Of the Offices of

WESTERN IRRIGATION AGRICULTURE  
and  
DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

September 3, 1921.

No. 10

## Western Irrigation Agriculture.

### Belle Fourche.

( No report received ).

### Huntley.

The maximum temperature for the week ending September 3 was 99, minimum 51, and precipitation 0.13 inch.

Harvest of third cutting of alfalfa was completed during the week. The yield of this crop was low on many parts of the project due to injury by grasshopper invasion. Yields of grain on the project were comparatively low. Wheat failed to fill properly due to excessive heat at the time of maturing. The yield of this crop was also no doubt affected by injury from grasshoppers. Yields of winter wheat on dry lands adjacent to the Huntley project are reported to be from 5 to 25 bushels per acre.

The annual project picnic was held at the experiment farm on August 27. The attendance was estimated to be about 1,500 people.

The third cutting of alfalfa from the irrigated rotations was harvested the first of the week. The alfalfa and beets were irrigated, this being the final irrigation for the beets. Potatoes were irrigated for the last time in the week ending August 27.

### Newlands.

( No report received ).

### San Antonio.

( No report received ).

### Scottsbluff.

( No report received )

### Umatilla.

( No report received )



Yuma.

( No report received ).

Demonstrations on Reclamation Projects.Minidoka.

( No report received ).

Newlands.

( No report received ).

Shoshone.

During the week ending September 3, twenty-three farm visits were made and 19 requests for assistance were received.

Work in relation to the N.W. Wyoming fair was continued. A trip was made to Deaver, Frannie and Cowley, Wyoming, in company with Mr. Scott of Powell, Superintendent of the poultry department. A number of farms were visited and instructions given concerning the selection and exhibition of poultry. Another day was spent in the vicinity of Garland where to three cow owners were explained the points of dairy cattle and how to fit them for showing, and a brief demonstration of judging was made for the purpose of helping owners to fit themselves to do their own selecting for exhibition.

Assistance was given in demonstrating live stock judging to boys' and girl club members who are to participate in a judging contest at the Wyoming State Fair, to be held at Douglas, Wyoming.

A representative of the Peters Milling Company recently made it known that the Powell alfalfa mill will not operate before November 1, and perhaps not then. The reason given is that the company has too much unsold meal on hand.

An order for a car to be loaded with sheep September 7 for the Omaha market was cancelled on Friday and the shipment postponed indefinitely, the owners feeling that market conditions make a shipment at this time inadvisable.

Uncompahgre.

An attempt was made to visit the Sneffels ranch above Ridgway during the week ending August 20 to confer with Mr. Rohlf's regarding the calves secured from him for club work but, on account of rain, it was impossible to climb the steep grade to the ranch.





Uncompahgre (continued).

One day was spent in weighing the rest of the pigs for club members. Two of these pigs belong to Mexican boys who are proving to be very poor feeders and the pigs are showing the results, weighing only 70 and 80 pounds at nearly five months. All of the others are doing well, most of them weighing around 150 pounds and showing very good form. Altogether, they promise to furnish a very interesting job for the judge who places them at the fair.

Milk River.

During the week ending August 27, three farm visits were made, five calls for assistance were received, and irrigation work was accomplished over 130 acres. The maximum temperature during the week was 96 and minimum 49.

The week was largely given over to preparation work for the county fairs on the project. Two days were spent, however, in the field and repair work on field ditches was outlined over 40 acres which is to be irrigated and sown into winter wheat. Assistance was also given to one farmer in applying water to 10 acres of sunflowers, the furrow method being used.

One day of the week was spent at the Nashau community fair and, by request, assistance was given the county agent in judging the agricultural exhibits. A collective display of exhibits was also secured for the Valley County fair.

Threshing and harvesting is still in full force on the project and one report of a yield of 50 bushels of wheat per acre was received but the average yield is running about 15 to 20 bushels per acre.

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# W E E K L Y   B U L L E T I N

Of The Offices of

## WESTERN IRRIGATION AGRICULTURE and DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

September 10, 1921.

No. 11

### Western Irrigation Agriculture.

#### Belle Fourche.

( No report received ).

#### Huntley.

( No report received ).

#### Newlands.

During the period August 13 to September 3, Mr. Headley reports that gypsum was applied at the rate of 1,000 pounds per acre on plats F 1 and F 13 and the plats were then plowed. Plats C 6, 8 and 10 were also plowed.

The corn was cut and the silo filled. 16,205 pounds of corn were put in the silo and the balance stacked as fodder. The yields of the individual corn plats were as follows:

Plat Number	Area	Yield Pounds	Yields per Acre, Pounds.
D 3	.34	4810	14,147
F 8	.25	3400	13,600
F 12	.25	3945	15,780
E 2	.57	7205	12,640
E 1	.56	7879	14,068

Corn was harvested on experimental plats B 9 and B 10 and hog millet and Japanese millet on C 11, 12 and 13 was cut.

#### San Antonio.

During the two weeks' period ending September 3, the drought continued and all vegetables suffered severely. Pastures and meadows have become very poor, while sorghum fields have burned so badly that recovery is doubtful even though a good rain falls





San Antonio (continued).

soon. Cotton plants are losing their leaves badly, but the yield in this region will not be influenced by the drought as boll weevils have prevented the development of bolls since the first of July.

Meteorological data has been recorded as follows: week ending August 27; maximum 102, minimum 70, greatest daily range 32; week ending September 3; maximum 100, minimum 68, greatest daily range 25, and precipitation .02 inch.

Station work during this period consisted of picking cotton on rotation plats and field C6, clearing fence rows and rebuilding pasture fence, baling hay, disking rotation plats and fallow fields for weed control, harvesting row sorghums on rotation plats, hauling manure, and upkeep work on grounds and machinery. Practically continuous irrigation of lawns and ornamentals has been necessary.

The first picking of cotton from rotation plats, made from August 16 to September 1, inclusive, gave an average yield of 426 pounds of seed cotton per acre.

Scottsbluff.

( No report received ).

Umatilla.

( No report received ).

Yuma.

The maximum temperature for the week ending September 10 was 106, minimum 55, and greatest daily range 38.

Since the first of the month the nights have been comfortably cool although the daily temperatures are still quite high.

Cotton and alfalfa seed growers have been feeling more optimistic during the week on account of the advance in prices for these crops. Cotton sold in Somerton on Monday for 20 cents, while certified Hairy Peruvian alfalfa seed is now bringing 18 cents. The price for cotton picking remains at \$1.00 per hundred pounds for Upland and \$2.00 for Egyptian, with more pickers reporting for work each succeeding week.

Most of the grain sorghums harvested up to the present time have come off the Indian Reservation. Dwarf milo and dwarf hegari are selling for \$17.00 per ton in the head, delivered.

Station work performed during the week consisted of plowing under cow peas in the garden plats, plowing nurseries, harvesting



Yuma (continued).

alfalfa in the fig orchard, digging out fig stumps, building fence on alfalfa plats B-5-6, and general cultivating and hoeing.

Mr. Yeh, a Chinese cotton student, was a station visitor on September 6.

Demonstrations on Reclamation Projects.Minidoka.

( No report received ).

Newlands.

During the fourteen-day period from August 23 to September 6, the entire time was spent away from the project for the purpose of locating dairy cattle and assisting in selecting dairy cattle for two ranchers on the project. The time was spent in the vicinities of Sacramento, Marysville and Woodland, California. A large number of cattle were found for sale, most of the cattle for sale being bred and unbred heifers. A quite thorough canvass was made of all the herds offered for sale before any purchases were made. During the trip, three car loads of dairy cows and heifers were purchased. The cattle were of good quality high-grade Holsteins and were all heavy springers. It was very fortunate that cattle were found that would calve very shortly after reaching the project. In this way, the herd is immediately increased in numbers and the cows start their lactation period on the project.

The price paid in California for these cattle was \$115.00 each for cows and \$100.00 each for heavy springing heifers. While away on this trip information was gathered for a number of other ranchers who expect to purchase cattle in the very near future.

The prevalence of tuberculosis in the dairy herds of California offers obstacles in the importation of cattle from that state. One hundred and seven cattle from one herd were selected on the last trip to be tested for tuberculosis and only 82 non-reactors were secured. Previous tests on herds in California for securing cattle for importation into this project have shown about the same percentage of reactors. A great many dairymen object to having their herds tested.

The cattle purchased arrived in good condition and a number of them have already calved.





Shoshone.

During the week ending September 10, six farm visits were made and 31 requests for assistance were received.

A few owners of stock hogs requested information as to whether or not a good market exists at the present time. Many inquiries were made, and also a few farms were visited, for the purpose of getting lined up on the matter and weight of such hogs, and a number of letters were written to dealers who have bought hogs here in preceding years. It was discovered that most owners wish to keep their animals on the farm until they have cleaned up grain fields and consumed other feed which would otherwise be wasted. It is probable that a sufficient number to make a car load will not be ready before November 1.

Inquiries are being received concerning lambs and ewes for feeding but, as yet, none have been purchased by farmers because the price asked is higher than the banks will permit borrowers to pay.

Work relating to the Wyoming Fair continues to take up considerable time. The Powell Chamber of Commerce has doubled the premium for the cow giving the most milk and also for the one whose milk tests highest.

Uncompahgre.

( No report received ).

Milk River.

During the week ending September 3, meteorological data were recorded as follows: maximum temperature 101, minimum 41, and precipitation .04 inches.

The week was given over to demonstration work at the two county fairs on the project. The two miniature farms which were equipped with irrigation structures and farmstead buildings were used to demonstrate different irrigation methods on a tract representing 80 acres where a crop rotation of corn, wheat, oats and alfalfa were being grown with alfalfa as the principle crop. The miniature alfalfa field representing 40 acres was irrigated by the border check method. It was thought best to make this method the most prominent since a large portion of the Milk River Valley farms are adaptable to this method of irrigation. Water was run in the miniature canals and field ditches and actually flooded over the land. The water was made available by an attached hose which was buried at one end of the canal and the head of water was controlled by a regular faucet valve.



Milk River (continued).

Considerable interest and attention was attracted by this exhibit. A chart was displayed in connection with it, showing the irrigable area and the irrigation area on the project and also the water requirement of the common crops grown. Many questions were asked and a short explanatory talk was given several times each day to different crowds as they gathered around the exhibit.

MISCELLANEOUS.Aluminum Sulphate in Nevada.

It has been found by laboratory and field experiments that aluminum sulphate is very effective as a remedy for the impermeable condition found in many irrigated soils in the West. The reclamation of these impermeable soils seems practicable if adequate supplies of aluminum sulphate can be secured at moderate cost. Mr. Headley has just reported the discovery of an aluminum sulphate mine near the Lahontan Reservoir on the Newlands project. This mine has been located by Mr. R. C. Wilson. It is situated on the line between sections 16 and 17, R 26 E, town 18. A sample of the material tested in the laboratory shows something over 30 per cent of water soluble substance with about 28 per cent aluminum sulphate. Preliminary laboratory tests show this material to be effective in correcting the impermeability of hard soils and field experiments in its application are being made on the Newlands project, both on the experiment farm and in cooperation with several farmers.

C.S.S.

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WEEKLY BULLETIN  
Of the Offices of  
WESTERN IRRIGATION AGRICULTURE  
AND  
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No. 12

Western Irrigation Agriculture.

Huntley

The maximum temperature for the week ending September 10 was 79, minimum 32, and precipitation .28 inch.

The first killing frost of the season occurred on the night of September 10, when the minimum temperature recorded was 24. Garden crops, late corn and alfalfa were damaged by this freeze, which occurred about 10 days earlier than the average for the past 10 years at this station.

Filling of silos was completed during the week. About 140 tons of corn was placed in two silos.

Corn varieties for silage were harvested during the week. Varieties Northwestern Dent and Paynes White Dent were fairly well matured when harvested for silage while the variety calico was beginning to dent and Golden Glow was in the "roasting ear" stage.

There was very little work done on the rotations the past week. The potatoes in L-IV were given an additional irrigation, as were those that were dry in Field K. The stubble plats were so dry as to be almost impossible to plow so they were given an irrigation.

Belle Fourche.

( No report received ).

Newlands.

( No report received ).

San Antonio

During the week ending September 10, the following meteorological data were recorded: maximum temperature 98, minimum 71, greatest daily range 27, and precipitation 4.82 inches. The rainfall came on three successive days, for the most part in a comparatively gentle rain, and very little run-off or washing occurred at the station. This precipitation broke a drought of two months duration.

North and East of San Antonio the precipitation was much heavier than recorded at the experiment farm; a veritable cloudburst, accompanied by a spectacular electrical display, occurring just north of the city. Flood waters of the San Antonio river and tributary creeks inundated the lower sections of the city and much of the agricultural lands adjacent to the streams. The loss within the city has been given as fifty dead (bodies recovered), fourteen persons missing, scores of homes totally destroyed several hundred head of livestock drowned, and a property loss variously estimated at from four to six millions of dollars. Throughout the



San Antonio (continued).

farming section of the San Antonio region the results of the storm were generally more beneficial than destructive as the bulk of the cotton crop had already been picked and all other vegetation was badly in need of moisture.

The work on the station during the week consisted of spring-tooth harrowing fields C3, D3, and F3; mowing weeds and Johnson grass in the pasture on field D4; picking cotton from the Kekchi breeding block on the Herbst's farm; chopping Johnson grass from orchards A3, B3, and E3; repairing machinery, and cleaning grain.

Demonstrations on Reclamation Projects.Miridoka.

During the week ending September 10, 46 farm visits were made, and 16 requests for assistance were received.

Attention during the week was given chief to three matters, one of which was the testing of all herds that were to be shown at the Minidoka County Fair at Rupert September 8-9-10. A total of 28 herds, consisting of 250 head of cattle, were tested. A total of 4 reactors were found and arrangements for disposal made.

Due to the fact that Dr. M. Shipley, Bureau of Animal Industry, did not have his own transportation, it was necessary to line up the herds to be tested and to act as guide and assistant to him. Due to the finding of the 4 reactors, many requests for tests are coming into this office.

Work with the fair necessitated conferences with managers and live stock superintendents, as well as the special work with the Minidoka county Shorthorn Calf Club. This is the second year for the Club and it is proving to be the most successful year of the two. Nine heifers were shown at the fair.

Due to the silo and silage crop work carried on this year on the Minidoka Project, it was thought advisable to have a wooden hoop silo and silage crop exhibit at the fair. A very fine exhibit of this nature was put up by this office.

A great amount of time during the week was given to livestock exhibits at the fair.

Newlands.

Seventeen calls for assistance were received and four farm visits were made during the week ending September 10.

Mr. Cooley reached the project on the morning of September 7 and left in the evening of the following day. Some time was spent with him going over the project and in discussing the work of the office. Visits were made to two ranches where new silos were being constructed from the plans furnished by this office. Two other silos on the project of similar construction have been in use three years and are standing up well. These silos may be constructed quickly and are inexpensive.

Since returning to the project from the last cow buying trip several more ranches have signified their desire to purchase dairy herds and it is very likely that another trip will be made soon providing a sufficient number of ranchers want to participate at one time.





Shoshone

( No report received ).

Uncompahgre.

( No report received ).

Milk River.

During the week ending September 10, threshing and harvesting of grains and third cutting alfalfa continued until the last two days of the week, when the weather turned extremely cold and heavy rain and snow fell over the entire project. All field work was suspended and will probably not be resumed for some time.

An irrigation meeting of the business men and settlers of the project was held at Malta during the week, where an organization was effected to formulate plans to hasten the present arrested development of the project. It is expected that steps will be taken by this organization in cooperation with the Great Northern Railway to get new settlers on the undeveloped lands on the project and start all other operations that are thought advisable and necessary. Settlers at the meeting were also urged to attend the joint commission meeting at Chinook September 15 where the question relative to the division of the waters of the Milk River between the United States and Canada is to be discussed and decided. Dr. F. H. Newell, formerly Director of the Reclamation Service explained that it was very important that a large representation of the settlers of Milk River Valley be present at this meeting and suggested that one or more men from each community act as a committee to get a sufficient number interested to justify a special train from the eastern part of the project to Chinook and return. The writer, has, therefore, been doing some work during the week in cooperation with commercial clubs of different towns towards getting the farmers interested in this meeting. A special train was arranged for and present indications are that the expected number will be present at the Chinook meeting.

Work was also started during the week towards getting a small tract of land in each community for irrigation demonstration work next year. Two farmers were lined up and an appointment was made with them for necessary preparation work relative to leveling and ditching the land this fall as soon as weather conditions will permit. The farmers are interested in this work and seem to be anxious for an opportunity to cooperate in a demonstration of irrigation methods.



W E E K L Y   B U L L E T I N

Of the Offices of

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September 24, 1921

No. 13

Western Irrigation Agriculture.

Belle Fourche.

( No report received ).

Huntley.

( No report received ).

Newlands.

(No report received ).

San Antonio.

During the week ending September 17, the following meteorological data were recorded: maximum temperature 92, minimum 69, and greatest daily range 22. A trace of precipitation was recorded for September 11 and 14. The weather during the week was threatening, there being 4 partly cloudy days and 3 cloudy days.

The rains of the preceding week caused a rapid recovery of most vegetation, pastures and meadows being especially benefited. Many orchard trees were so severely burned by the drought which prevailed during July and August that recovery is uncertain. The combination of extreme drought followed by heavy rains and warm weather has caused some of the apricot, peach, and plum trees to open flower buds.

The work on the station during the week consisted of erecting a rat-proof, galvanized iron, grain bin; building a cement culvert in front of the farm residence; hauling sand and gravel for the greenhouse, and for repair of roads, respectively; chopping Johnson grass from the orchards; and a general overhauling of machinery. Eight dead trees were removed from orchards A1 and B3.

Yuma.

The maximum temperature for the week ending September 17 was 101, minimum 55, greatest daily range 33, precipitation 0.

The outstanding features in the marketing of crops on the Yuma Project during the past week has been the steady increase in the selling price of Hairy Peruvian alfalfa seed. It seems quite likely that a near shortage of





Yuma (continued).

good seed will develop. The Farm Bureau Exchange of Yuma County sold two carloads of certified seed during the week for 20.5 cents and 21 cents per pound. A few growers are harvesting a late seed crop but the yields are below average. Most of the alfalfa fields at this time of the year are infested with the yellow butterfly.

The cotton situation during the week remained fairly constant. Ginning prices for Upland cotton are 30 cents per cwt. seed cotton for the shorter varieties and 40 cents for Durango and Acala.

Station work performed during the week consisted of plowing roads; harvesting alfalfa, Al to 8; plowing under cowpeas on nursery plats; general irrigating, cultivating and hoeing.

Scottsbluff.

( No report received ).

Umatilla

( No report received ).

Demonstrations on Reclamation Projects.

Minidoka.

During the week ending September 17, 26 farmers were visited, and 17 requests for assistance were received.

The greater part of the time was given to the completion of the tuberculosis testing in Minidoka and Cassia Counties. A total of 12 herds having a total of 154 head of cattle were tested in Cassia County and no reactors were found.

During the summer a silage corn variety test has been carried on by this office on the Donaldson Bros., farm south of Rupert. Six varieties of corn were planted on 12 one-eighth acre plots. All plots were hand planted on the same day. During the summer four readings were taken.

Friday, Sept. 16, a silo and silage crop excursion was held, the afternoon being spent at the Donaldson farm where the excursionists studied the filling of the silo and helped in the gathering and weighing of the test plots. The following varieties of corn were used in this test: Iowa Silvermine, Leaming, Pride of the North, Minnesota No. 13, Cassia County White Flint, and White Dent. At the present time all the data has not been compiled on this test so results will be contained in next week's report.

During the past two weeks, five wooden silos (hoop) have been built on this project, four near Rupert and one near Declo. There are three 10 x 30 and two 12 x 32.



Newlands.

During the week ending September 17, considerable time was devoted to the local Churchill County fair. One of the features that required some time was the construction of a section of the modified Gurler silo for exhibition purposes at the fair. This section was finished inside and out. The method of construction is the same as is being used on the silos on the project. Two new silos of the same construction were being erected on two farms at the time of the fair.

The milking contest at the fair was under the supervision of this office. Only five animals were entered due to a misunderstanding as to requirements. The entries consisted of two registered Holsteins and three registered Ayrshires. The results of the contest were as follows for the two day test: Holstein first place, value of products \$3.72; second place, Holstein, value of products \$2.24; third place, Ayrshire, value of products \$1.98; fourth place, Ayrshire, value of products \$1.85; fifth place, Ayrshire, value of products \$.62.

Thirty eight calls for assistance were received and three visits were made to farms.

During the week some time was devoted to the construction and filling of two homemade silos on the project.

Shoshone.

With the exception of one day, the whole of the week ending September 17 was taken up with work in connection with the Northwest Wyoming Fair.

The agricultural exhibit was large and fair in quality, the potato exhibit being the best, a result, no doubt, of the education furnished largely by the potato growers association during the past four years. There were about 150 entries of livestock, but the selections made by exhibitors in many cases were not wholly creditable. In fact, exhibits in all departments indicate the need of more knowledge of types. As this was the first fair, rapid improvement can be expected in the future.

Uncompahgre.

( No report received ).

Milk River.

During the week ending September 17, the weather records at Malta showed a maximum temperature of 55, minimum 32, and precipitation 1.46 inches.

The first part of the week was spent in the vicinity of Saco and Hinsdale, helping committees to get required representation from each town to attend a commission meeting at Chinook. On Wednesday of the week a representation from the project of about 300 settlers attended the meeting. A hearing was held before the international joint commission relative to the division of the waters of Milk and St. Mary rivers. Representative farmers from each community were asked to describe their needs and experiences with reference to the available





Milk River (continued).

water supply of Milk River. The commission will meet the settlers on St. Mary's river at a hearing at Lethbridge, Canada, during the coming week and it is then expected that the controversy will be settled between the two countries.

Field work has been almost impossible during the past week on account of stormy weather and bad roads. One farm was outlined, however, for preparation work consisting of setting grade stakes on control lines every 50 feet and also staking off ditches and dikes. Leveling work and construction of dykes and ditches will begin as soon as the weather will permit.

Two other farms were chosen for similar preparation, one at Hinsdale and one at Dodson. Plans and instructions will be made on these farms during the coming week. One 40-acre farm of alfalfa was examined during the week, which was reported dying, but since the recent rains it has commenced to revive and it is thought that a good irrigation will be all that is needed to save the crop.

Threshing and harvesting is not yet over on the project but was suspended during the week on account of wet weather.

The potato crop on the project is small and very few fields have been harvested at this writing. A few loads however have been sold locally at \$2.00 per cwt.



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No. 14

Western Irrigation Agriculture

Belle Fourche.

( No report received ).

Newlands.

Mr. Headley reports the following activities for the period from September 3 to September 24:

Cooperative Experiment in the Reclamation of Impervious Soil on the Farm of J. M. Heizer:- This farm is located on the Lincoln Highway about 6 miles west of Fallon. A number of hard, impervious spots that have always been non-productive were selected for an experiment to determine the effect of gypsum and alum in rendering them more fertile. Holes three feet deep were bored with an inch auger at intervals of about 10 feet in the hard spots. One-third of a stick of dynamite was exploded in each hole at a depth of 18 inches. Gypsum was then applied in one strip at the rate of about 4 tons per acre and in another strip crude Lahontan alum 20 tons per acre. This large application was made necessary because of the large amount of inert matter, earth and rock mixed with the alum. An untreated strip was left between the gypsum and alum applications. The field will now be flooded and the water left on for two days in order to wash out as much of the soluble salts as possible.

Lahontan Alum.- The mining and hauling of 10 tons of alum from Lahontan has been completed. Before using it is necessary to crush and sift the alum ore. About one-third of the material is thrown out as useless. Analysis indicate that only about one-fifth of the remaining material is alum and it also contains some gypsum. Trials with percolation tubes indicate that an application of 20 tons per acre of the crude alum is about equivalent to four tons of pure alum in its effect on the soil.

Crop Yields.- The third crop of alfalfa hay was cut September 5 and 6 which is about 2 weeks earlier than usual. The average yield per acre was 1.00, 0.89 and 0.80 tons for each cutting or a total of 2.69 tons per acre for the year.

The greenhouse, bunk house, and the interiors of the cook house and laboratory have been painted; the front room of the laboratory and two rooms in the superintendent's house have been repapered. It is the intention to paint the barn, laboratory, and office as soon as the field work permits.

The first killing frost occurred on the morning of September 13, which is one week earlier than the average. Great harm resulted to the cantaloupe growers as most of the fields were at the height of their productivity when the frost occurred.





Newlands (continued).

The millet on C11, 12, and 13 was harvested. Hog millet on an area of .73 acres yielded 205 pounds of seed or a yield of 280.8 pounds per acre. The Japanese millet on an area of .51 acres yielded, 1375 pounds of hay or a yield of 2,696 pounds per acre.

During the three days September 14, 15 and 16, the Churchill County Fair was in progress. This year the experiment farm exhibited and endeavored by the showing of crops not generally grown in this district, and by the aid of charts, to show the farmers the possibility of increasing their yearly returns.

Mr. A. C. Cooley was a station visitor September 7 and 8.

Huntley.

Director F. B. Linfield and Messrs. Harrington and McKee, of the Montana Experiment Station were visitors during the week ending September 24.

The harvest of sugar beets on the project was begun on September 19. The yields are above the average of past years and conditions so far have been favorable for the work of harvesting. There has been no rain of consequence during late summer and fall and the soil on dry lands does not contain sufficient moisture for germination of winter wheat. At the experiment farm stubble land was irrigated for fall plowing.

Estimates of the corn plats to be hogged off in the irrigated rotations were taken last week. Stand counts of the spring seeded and continuous alfalfa plats were also taken last week. Tile crossings were put in in the irrigated rotation field.

Scottsbluff.

The week ending September 24 was very favorable for harvesting crops. The maximum temperature was 88, minimum 33, and precipitation .33 inch. Although the minimum temperature indicates that there was no frost, most plants show that there was a frost on the 21st., when the temperature showed a minimum of 33 degrees.

Filling of the two pit silos was completed. The three acres of silage corn which follows sweet clover that was pastured during the summer of 1920 yielded a total of 46.07 tons. Potato digging on the rotation plats was begun. The indications are that the yield will be similar to last year's yield. The potatoes from the short rotation are again very scabby. The third cutting of alfalfa was cut and bunched.

The station put up an exhibit at the county fair showing (1) the effect of manure and alfalfa on the yield of sugar beets, (2) the effect of delayed thinning on the yield of sugar beets, (3) effect of alfalfa and manure on the yield of potatoes, and (4) effect of irrigation on potatoes for seed purposes.

Umatilla.

( No report received ).



Yuma

The maximum temperature for the week ending September 24, was 103, minimum 49, and greatest daily range 47.

Compared with the records last year the daily temperatures for this period are considerably higher. This drying weather is making it necessary to continue the irrigations later than usual.

Marketing conditions for project crops are about the same as for last week. The price of alfalfa seed and cotton is hanging around 21 and 18 cents, respectively. Three gins in the lower valley have fitted up one row of their stands to be used for the ginning of Durango and Acala cotton. In last week's report the ginning price for these extra staple Upland cottons was incorrectly reported as 40 cents per cwt. seed cotton. The correct figure is 45 cents.

Considerable interest is being taken at present in the development of the South Gila Valley and adjacent mesa. It is reported that a large planting of grapes will be made in this district this coming winter and spring.

Station work performed during the week consisted of harvesting Golden Millet, harvesting Blackeye, White Hybrid and Catjang cowpeas, plowing roads, harvesting alfalfa, and general irrigating and cultivating.

Station visitors during the week were Senor Raul Costemalle, of Uruguay, and Mr. Osburn, who is connected with the Hawaiian Sugar Planters Company.

Demonstrations on Reclamation Projects.Newlands.

During the past week ending September 24, correspondence was taken up for two ranchers who expected to import four cars of dairy cattle as soon as they can be located by means of correspondence. A number of prospective dairymen are interested in the federal loan to ranchers and stockmen. If they are able to secure funds from this source the importation of dairy cattle into this valley will be greatly stimulated.

The harvesting of the third crop of alfalfa hay was quite generally started over the project during the week. A good yield of third crop alfalfa hay is anticipated. There is a very small movement of hay out of the project. Perhaps one or two car loads a day would cover the shipments.

One article was contributed to the local papers showing the results of the milking contest at the county fair, which was conducted by this office.

The principal activities at the present time consist in locating dairy cattle for prospective dairymen and in establishing dairy herds on the project. In this connection considerable time is spent in the securing of herd bulls and in assisting in arranging the corrals and milking sheds on the farms. The efforts of this office in promoting the dairy industry seems to be showing results. Several of the ranchers on the older and larger ranches, who have been for years past handling large herds of beef cattle, are now turning their attention to dairying and are preparing to enter the dairy business on a large scale.

Thirty calls for assistance were received and five visits made to farm during the week.





Newlands (continued).

A meeting was held at the close of the week which included the men of the extension division of the state and their representatives in this County, Mr. Headley, and myself, for the purpose of a more definite co-operation in handling the demonstration and extension work. A concentration of efforts along certain lines was planned for. It was proposed at the meeting that the plans of operation of the different men of the different departments be made available to all the men working in this district, so that whenever possible, the other members doing extension work can cooperate in promoting these lines of work. This scheme, however, will not change the work of this office, but will render some assistance in the general plan of promoting the dairy and hog industries on the project.

Shoshone.

With the exception of Saturday, the entire week ending September 24 was taken up with work involved in the discharge of duties and the superintendent of the boys' and girls' club department of the Midland Fair, Billings, Montana.

As a whole, the exhibits at the fair were not as they were last year. This was noticed more in the live stock departments than elsewhere. The number of hogs was considerably smaller and less than 10 sheep were on exhibit. In the boys' and girls' department, there was the best and most extensive potato display since the department was started. This came about largely as a result of the efforts of the Billings Commercial Club which furnished certified seed and paid premiums to the amount of \$300. The poultry, hog, and sheep exhibits were about equal in extent and quality to those of last year. There were no cattle shown in this department.

The superintendent of the Powell alfalfa mill has stated that the Milling company is ready to contract hay at \$5 per ton. About 200 tons recently changed hands locally at that price. The Lewis potato company shipped 2 cars of potatoes last week which it is believed will net the growers \$1.44 per cwt. for sacked potatoes. Cash buyers are offering \$1.25 for sacked potatoes loaded on cars at Powell. Local price of wheat Saturday was, hard 95 cents per bushel, soft 85 cents per bushel, and butter fat sold for 33 cents per pound.

Uncompahgre.

Two days of the week ending September 3 were spent with live stock clubs visiting farms of breeders of purebred stock to practice stock judging. Club members have been taken out in small groups at various times through the summer and given instruction in comparative stock judging.

Rings of three or four animals have been used on the later trips and members have been required to place the animals and write reasons for their placings.

Wednesday was spent visiting breeders at purebred livestock in the interests of the Montrose fair. Everyone visited stated that they hoped to exhibit at the fair.



Uncompahgre (continued).

Mr. P. C. Jamieson, Poultry Specialist with the Extension Service of the Agricultural College, arrived in Montrose Friday morning and the rest of the week was spent with him in putting on poultry-culling demonstrations which had been previously arranged. Three were given near Montrose on Friday and three near Delta on Saturday. This work, which is new on the Uncompahgre project, has been in mind for some time, and it is hoped that it can be followed up in a definite way. Interest in the demonstrations was good, although the attendance was not large, averaging about 20.

Mr. Jamieson, poultry specialist was in Montrose and Delta Counties Monday and Tuesday of the week ending September 10, and Monday was spent with him near Delta near Delta, giving three culling demonstrations. Two of these were especially good. Three other demonstrations were given Tuesday by Mr. Jamieson and Mr. King, the one on C. C. Wortman's farm at Olathe being the best attended of any Mr. Jamieson had held in the state up to that time.

The Intermountain fair was held at Grand Junction this week and was visited on Wednesday. Assistance was given in judging livestock classes in return for which County Agent McCann is to assist with the same work at Montrose. The fair was far better than last year. In the livestock exhibits, the Herefords and Jerseys were the main features, Poland Chinas being also strong.

On Saturday, the final club excursion was held, all of the clubs combining. Club leaders, parents, and bankers were especially invited to go on the excursion and several of them attended. There were 13 autos and 67 persons on the trip. Two farms were visited where dairy cows and hogs were judged and a short meeting was held following the picnic dinner.

The Delta County Fair at Hotchkiss during the week ending September 17 was probably the best ever held there. Live stock classes were well filled, except the sheep classes. Assistance was given in judging cattle, hogs, and sheep. The district futurity show of Duroc-Jerseys, formerly held at Montrose, was held at Hotchkiss this year.

Practically all of the remainder of the week was devoted to the local fair which opens Monday of next week.

Milk River.

During the week ending September 24, eight farm visits were made, ten calls for assistance were received, and irrigation systems were planned and laid out on 160 acres in different fields. The maximum temperature was 78, minimum 36, and precipitation .04 inch.

The entire week was spent surveying and planning irrigation systems for different farmers. Two fields were laid out for demonstration purposes and extra preparation work is to be given these fields. In order to do a good job of leveling and laying out of ditches and dikes extra work was done with the survey level to establish controls that will be





Milk River (continued).

helpful in leveling and preparing the land. Wherever it is possible, preparations are being made to turn water on the land this fall, in order that all necessary changes in the scheme layed out can be noticed and corrected immediately.

The farmers on the project are still busy threshing and cutting third crop alfalfa. Some trouble is being experienced in getting this crop of alfalfa to cure, due to the unsettled weather conditions. Some farmers are turning their hay several times daily. Fall plowing has commenced in different parts of the project and a few farmers are beginning to sow winter wheat. The planting of winter wheat is necessarily late on account of the grasshopper pest. Farmers have been afraid to sow until the hoppers begin to disappear. No alfalfa seed threshing has been reported at this writing but yields on the project are low this year and some crops are being left for fall pasture since it is thought that they will not justify the expense of harvesting.

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W E E K L Y   B U L L E T I N

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No. 15

Western Irrigation Agriculture.

Belle Fourche.

( No report received ).

Huntley.

( No report received ).

Newlands

During the week ending October 1, the balance of the Lahontan alum was hauled, making a total of 10 tons. At present 8 to 9 tons are stored at the experiment station and as soon as it is ground and screened some the hard spots on series "Y" will be treated.

During this period the potatoes were harvested. Due to blight, the yields are much less than in previous years. In fact, the decrease was so severe that this year's results are several times less than a normal yield.

The Burbanks and Producer were very irregular in shape showing much second growth. Of the two, the Burbanks were the worst. The Colorado Pearl, besides being one of the heaviest of the producers, was the smoothest in appearance and the most regular in shape and size. Ranking next to them in smoothness were the Russets.

The sorghums having been previously shocked were hauled and weighed as fodder. The sorghums were planted May 24 with a garden drill in rows 3-1/2 feet apart and of all those planted, the Early Amber Cane was the only one to mature seed.

This year the tomato yields were materially decreased by the occurrence of the early frosts in September. Some of the plants were at their maximum production while such varieties as Dwarf Champion, Coreless, Santa Rosa, and Stone had just commenced to produce.

San Antonio.

For the week ending September 24, the maximum temperature was 94, minimum 68, greatest daily range 26, and precipitation .08 inch. During the week ending October 1 the maximum temperature was 93, minimum 61, greatest daily range 27, and precipitation 1.92 inches. The first "norther" of the season, accompanied by a precipitation of 1.18 inches, occurred the night of September 29.





San Antonio (continued).

About noon of September 26 it was noticed that swarms of small butterflies, which have been identified as the Southern Snout Butterfly (Libythea carinenta), were flying in a southeasterly direction. This flight was continuous, during daylight, through the end of the week. Local representatives of the Bureau of Entomology are making observations regarding the origin and destination of these insects in an attempt to determine the cause and possible effect of so vast a migration. The "ribbon of flight" is known to be at least two hundred miles wide. It appears that very little has been written regarding this butterfly and the writer has been unable to learn the feeding habits of the caterpillar.

The second and final picking of Kekchi cotton on the Herbst farm plat, also the second picking of Lone Star cotton from the breeding block on field F<sup>3</sup>, and from the thinning experiment on field B<sup>4</sup>, has been gathered.

The five rotation plats of sorghum planted in rows was cultivated. Fallow fields were disked for weed control. The farm garden, and portions of fields B<sup>3</sup> and C<sup>4</sup> used by the Office of Corn Investigations, were plowed.

All cotton harvested for seed, including breeding block selections and Lone Star bulk from rotations, was ginned. About one thousand pounds of good Lone Star seed has been kept for planting purposes.

Scottsbluff.

The weather during the week ending October 1 was very favorable for harvesting alfalfa, sugar beets and potatoes. The maximum temperature was 84, minimum 23, and precipitation 0. The freeze on the 30th was the first time this fall that the thermometer has gone as low as 32, although some plants have shown signs of having frosted.

The third cutting of alfalfa was put up in very good shape. Most beet farmers are hauling all the beets the factory will allow them to deliver. A farmer with about 20 acres is allowed to deliver about 3 tons per day. The limit will be lifted on October 7, when the real beet harvest will begin. Most potato farmers are now busy harvesting their potato crop.

The price of potatoes has taken a considerable slump the past week. About \$1.30 per cwt. is all the buyers are offering compared with \$1.70 two weeks ago. Since the slump many farmers are pitting their potatoes or putting them in cellars with the hope that the price will recover.

Labor is very much cheaper than a year ago.

Umatilla.

( No report received).

Yuma.

The maximum temperature for the week ending October 1 was 111, minimum 62, greatest daily range 46, and precipitation 3.29 inches.

The meteorological data recorded during the week included two station records for the year. The temperature of 111 recorded on the 25th. was the highest of the season. This period of high temperatures lasted three



Yuma (continued).

three days and was quite general throughout the Southwest. The heavy rainfall which included 2.59 inches on September 30 and .70 inch on October 1, was the heaviest recorded for the year. This one rain practically equaled the average annual rainfall for this section. Some damage was done to late alfalfa seed crops and stacks of alfalfa hay. The most serious damage to the project was the breaking of the main canal at several points along the north side of the Indian Reservation. The run-off from the mesa in that section broke the banks of the canal at the mouth of the large washes.

The rainfall recorded in Yuma was 3.58 inches. Considerable moisture also fell in the Salt River and Imperial Valleys.

Station work performed during the week consisted of plowing Sudan grass plats C39 to 41; harvesting cowpea varieties; planting fall garden; repairing machinery; and general irrigating and cultivating.

Mr. H. L. Westover, of the Office of Forage Crops, was a station visitor the last of the week.

Demonstrations on Reclamation Projects.Minidoka.

The entire week ending October 1 was spent at the Idaho State Fair at Boise, assisting the Shorthorn Calf Club members in shipping and showing their stock. Aside from the helpful information received from livestock specialists, the boys also took first, third, and fifth prizes on their stock in the club work. The interest shown in this work is continually increasing.

Newlands.

( No report received ).

Shoshone.

During the week ending October 1, 23 requests for assistance were received and 10 farm visits were made. A trip to Frannie and Deaver was made to consult further with farmers and bankers relative to the proposed importation of dairy cattle, the effort being made by the Agriculturist to acquaint all who are interested with the probable cost of such cattle as based upon information recently received by this office.

On Thursday, at the request of several farmers, a trip to Lovell, Wyoming was made to secure information as to the demand for hogs in that locality. Apparently the supply there will furnish the butchers all they wish to feed, but a few fat hogs may be required from time to time. It is believed that enough livestock will be fed close to the Sugar Factory to consume most if not all of the by-products. There is no pulp drier there, but dried pulp will be shipped from other factories and will be sold probably at \$15 per ton, f.o.b.. Lovell. At that price it should be an economical feed for cows on the Shoshone project.





Shoshone (continued)

Potato digging was in full swing during the forepart of the week, but at the end commission men refused to buy, claiming that the market had been glutted and demoralized.

Uncompangre.

( No report received ).

Milk River.

During the week ending October 1, eleven farm visits were made and irrigation work was done on 60 acres. Meteorological data was recorded as follows: maximum temperature 48, minimum 27, and precipitation .27 inch.

The outlining of tracts chosen for demonstration purposes continued during the week and at this writing one tract has been located in each of the principal towns on the project and it is expected that all of them will be plowed, leveled, and partially ditched before freezing weather comes this fall.

The first freezing frost of the season occurred September 30, when the minimum recorded was 27 degrees. Alfalfa, sunflowers, and some late garden stuff was damaged slightly, but this is considered late for the first frost on this project. Generally speaking, crops are well matured this year and most of the farmers have completed their harvesting at this writing.

The filling of a 150 ton silo with corn and sunflowers was completed during the week and it was found necessary to mix considerable water with the silage on account of letting the corn get dry.

In connection with the completion of the farm unit plats on the project by the Reclamation Service one day of the week was spent, by request of the project manager, in going over certain lands with the engineer in charge to make recommendations as what should be included and excluded on the basis of agricultural and irrigable area. About 500 or 600 acres were thrown out on account of alkali indications and poor character of soil.

A number of farmers on the project are inquiring about the possibility and advisability of harvesting native blue-joint-grass for seed. One small crop was threshed during the week and a sample was sent to the Montana Grain Inspection Laboratory for germination and purity test. It has been difficult to domesticate this grass, but the seed crop looks exceptionally good this year and some study is being made of its possibilities in the field by this office.



# W E E K L Y   B U L L E T I N

Of the Office of

## WESTERN IRRIGATION AGRICULTURE and DEMONSTRATIONS ON RECLAMATION PROJECTS

Vol. XIX.

October 15, 1921.

No. 16

### Western Irrigation Agriculture.

Belle Fourche.

( No report received ).

Huntley.

The maximum temperature during the week ending October 8 was 35, minimum 23, and precipitation 0.0 inch.

Weather conditions continued excellent for beet harvest and this work is nearing completion on many parts of the project. Yields are reported to be better than originally estimated and will be higher than the average of previous years.

Potatoes are selling locally at from \$1.00 to \$1.25 per cwt. The acreage in this crop is small and the yield and quality fairly good. During the past two seasons much difficulty has been experienced on the project in obtaining stands of alfalfa on spring seeding, due to drought and grasshopper damage, and several farmers have this season seeded in grain stubble after the grain was removed, a practice that has been successfully tried at the experiment farm for the past six years.

The harvesting of both the potatoes and beets was completed during the week. Grain and alfalfa plats were plowed. The potato and beet plats are now being plowed.

Newlands.

The maximum temperature for the week ending October 8 was 34, minimum 32, and precipitation, trace.

During this period the plats on C, D, E, and F and H-1 to 7, inclusive, received their last regular irrigation for the season. The remainder of the farm is to be irrigated later when water is ordered for the alum and gypsum treated plats on Y5 and Y11.

Plats E1, 2 and 3 were plowed and the Y series was cleared of weeds in preparation for plowing.

Some necessary repairs were made in building new bridges over irrigation ditches, the installing of a watering place for the horses that are now turned into the field and the continuance of the painting of the farm buildings.

The planned alum and gypsum treatments of soil are rapidly rounding into shape. The treated plats at Mr. Heizer's received about a 48-hour application of water. After three days drying the alum treated plats appeared to hold the water better being still somewhat damp. The top surface had a puffy appearance. In fact in the drier portions this was





Newlands (continued).

so pronounced that it gives quite a little encouragement that the treatment will be success.

The plats on the experiment farm were treated as follows: Two badly cemented soil plats, Y5 and Y11 were chosen, Y5 receiving the gypsum treatment and Y11 the alum. Y11 being about 85 feet by 230 feet was divided lengthwise into three equal plats, numbered 1, 2 and 3. Number 2 was again divided into halves or plats A and B. On a line drawn through the center of A, holes were drilled at intervals of 6 feet to a depth of 2-1/2 feet, or until loose, sandy soil was struck.

The alum bearing ore from Lahontan dam was sifted through a half inch wire mesh screen. An analysis of a general sample of this screened alum showed it to be 14 per cent soluble. In order to make an application of about 4 tons of soluble substance per acre it was necessary to apply 4 tons of the screened alum to plat No. 2. This application was accomplished by using the manure spreader.

The bored holes on A were shot with a half stick of dynamite in each hole at a depth of 18 to 24 inches. In this manner there will be a plat (A) treated with alum at the rate of four tons soluble alum per acre in conjunction with dynamiting the soil. Plat B will contain alum at the same rate but the soil will not be loosened up by dynamiting.

Y5 was divided and treated in the same manner as Y11 except that the alum was replaced by gypsum applied at the rate of 5-1/2 tons per acre.

The intention now is to flood these plats, keeping them under water for at least two days, then plow and allow to stand until spring. Water will then be applied in large amounts and the ground again plowed, or disked and planted.

The Tepary beans were threshed and found to have yielded 36 pounds from five rows 84 feet long, or a yield of 1245 pounds per acre. The yield would have been much heavier had not a patch of alkali soil prevented a heavy growth in one portion of the plat.

San Antonio.

The maximum temperature during the week ending October 3 was 90, minimum 52, greatest daily range 34, and precipitation .70 inch. The weather of the week was decidedly cooler than that of the preceding weeks, the mean temperature being 6.6 degrees lower than that of the week before.

Row-planted sorghum, harvested from rotation plats August 27, was hauled and weighed the latter part of the week. Cotton was picked from the "Thinning-Time-of-planting" test at the south end of C6. About 60 per cent of the plants in this planting were dead from root rot at the time of picking, but not more than 25 per cent of these died before making a small crop of cotton.

The forepart of the week was too wet for field work and the men were kept busy shelling, cleaning and storing corn; repairing machinery; cleaning corrals and barn-yard, and general upkeep of grounds and buildings.



Scottsbluff.

( No report received ).

Umatilla.

( No report received ).

Yuma.

The maximum temperature for the week ending October 8 was 93, minimum 55, and greatest daily range 36.

The daily temperatures during the past week have been higher than those usually recorded at this time of the year. These temperatures, combined with the high humidity following the heavy rains of last week, have caused a spell of sultry weather.

Cotton picking on the project is progressing in good shape. The subject of uniform picking prices has been discussed at meetings of the growers. Most of the crop is still being picked at \$1.00 per cwt. The rains last week caused a local decline in the price of lint. The common, short varieties of Upland cotton are selling at 19 cents. Acala is bringing 22 cents and Durango 25 cents.

The 1921 alfalfa seed crop on the project has just about been cleaned up. Very little seed of No. 1 quality is reported on hand by the seed dealers.

Repair work on the breaks in the main canal is progressing rapidly. Water will probably be turned in next week.

Station work performed during the week consisted of harvesting and threshing cowpea varieties, C1 to 7; plowing Sudan stubble C38 to 41; disking fallow nursery plats; hauling damaged hay from the stack yard; and repairing and remodeling buildings.

Mr. H. H. Willis, of the Office of Crop Acclimatization, was a station visitor during the week.

Demonstrations on Reclamation Projects.Minidoka.

( No report received ).

Newlands.

During the week ending October 1, 29 calls for assistance were received and visits were made to 10 farms. Much time was devoted during the week to herd testing work.

Mr. C. A. Norcross, State Marketing Specialist, opened a series of meetings on the project for the purpose of furthering the organization of a state marketing association. This endeavor excited much comment among the ranchers in the valley. Some time was devoted to attending these meetings.





Newlands (continued).

Considerable time was spent in getting in touch with parties contemplating importing dairy cattle from California and on Friday afternoon I started with one of the local ranchers on a trip to California for the purpose of buying dairy cattle. A stop was made at Reno, Nevada, on Saturday for the purpose of attending a meeting of farmers and bankers to discuss the methods of operation of the War Finance Corporation. After the meeting, the trip to California was resumed.

The greater part of the week ending October 8, also Friday and Saturday of the previous week was spent in making a trip by auto in the vicinity of Sacramento, California, in company with a local rancher for the purpose of selecting two car loads of dairy cattle to be shipped into the Newlands project. Young dairy heifers were wanted for this importation. Unbred heifers were preferred. The territory in the vicinity of Sacramento, Woodland and Davis, California, was visited in search of young Holstein heifers and a large number were found to be offered for sale. These cattle for the most part showed good breeding and were in good condition. The prices ranged as follows: \$35 for heifers 10 to 12 months old; \$50 for heifers 14 to 16 months old; \$75 to \$80 for springing heifers 2 to 2-1/2 years old. The cattle purchased were unbred heifers ranging from 15 months to 2-1/2 years and the price paid was \$65 per head subject to tuberculosis test. Out of 72 animals in this lot 11 reacted to the test. With this number of reactors, the cattle will be quarantined and have to be retested in Nevada in 60 days. This is a repetition of the experience we have had heretofore in procuring dairy cattle from California.

Shoshone.

During the week ending October 8, 18 requests for assistance were received and six farm visits were made. Besides attending to the requests for assistance of a miscellaneous nature, considerable time was devoted to a proposed demonstration of the value of dairying under the conditions existing on the Shoshone Project. Four farmers were found who agreed to attend to the weighing of milk and the keeping of records of milk produced and feed consumed beginning with November 1. It is desired that four more assist in this demonstration and efforts will be continued to find them.

Contrary to a notice previously given, the alfalfa milling company began contracting hay near the end of September at \$5 per ton. However, not many farmers were willing to sell at that price and a few days ago the Superintendent of the Powell mill received instructions to cease buying until further notice.

Uncompahgre.

The entire week ending September 24 was spent on work connected with the Western Slope Fair. Live stock entries were made on Monday and all judging was finished on Tuesday. Entries in some divisions were not as numerous as had been expected but as a whole the live stock exhibits were





Uncompahgre (continued).

probably the best ever shown at this fair. This was due largely to the number of entries by members of boy's and girls' clubs which constituted nearly the entire hog show. There were 25 entries in first year pig club, 7 in second-year pig club, 5 in lamb club and 8 in calf club. Grand championship on Duroc-Jersey sow was won by a first-year pig club girl, the Grand champion boar of the same breed was shown by a first-year pig club boy, and the grand champion Shorthorn bull was shown by a member of the calf club. Club exhibits also made up a large part of the poultry show.

On Wednesday, stock-judging contests were held for club members and for High School students taking Smith Hughes courses. Teams from Montrose Colorado, Olathe and Grand Junction competed, the Montrose team winning first place and one of the same team having highest individual score. In the club contest with 35 competitors, eight contestants were so nearly equal that they were required to compete again; two boys and one girl were chosen to the state fair to enter the State contest. A canning contest was also held to pick a team for the state fair. In addition to these teams four club Champions were chosen to attend the club camp at the State fair from Montrose County and three from Delta County. All of these left for Pueblo on Saturday.

Most of the week ending October 1 was spent at the State fair at Pueblo assisting with Montrose County exhibits, stock judging contest and the club camp. The fair was considered one of the best ever held at Pueblo in every respect.

Live stock entries were strong every place except in the horse and dairy cattle divisions, the Hereford show being especially good. Duroc-Jersey and Poland China hogs were also very strong.

Nearly 300 club members attended the club camp. Contests were held in stock-judging, canning, sewing and poultry culling. Delta county won first in stock judging, Montrose county took fifth in stock judging and third in canning. Montrose county won first place on school exhibits and third on agricultural exhibits.

Milk River.

During the week ending October 8, ten farm visits were made and 10 calls for assistance were received. Irrigation systems were planned and surveyed on about 410 acres. Meteorological data were recorded as follows: maximum temperature 77, minimum 22, and precipitation 0.0 inch.

The entire week was given over to planning and surveying farm irrigation systems for the farmers on the project. Very little fall work has been done at this writing with respect to leveling and preparing the land for irrigation but a number of the farmers expect to do a considerable amount of this work. One day was spent during the week getting leveling work started on a farm in the vicinity of Glasgow. A careful study and survey was made of the field and rough yardages estimated and computed with a total estimated cost of \$12.00 per acre for leveling and grading.

On one or two farms where work was done during the week, the farmers asked that an irrigation system be planned by running or winding the ditches around on the high ridges and thus avoid the expense of leveling, but





Milk River (continued).

wherever practicable the farmer was urged to level the land and then use a more systematic method, which is thought to be the more economical plan.

One day was spent in continuing the work of making recommendations as to what lands should be excluded or included on the basis of irrigable area with respect to the character of the soil and its agricultural quality.

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# WEEKLY BULLETIN

Of the Offices of

## WESTERN IRRIGATION AGRICULTURE and DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

October 22, 1921.

No. 17

### Western Irrigation Agriculture

#### Belle Fourche.

( No report received ).

#### Huntley.

( No report received ).

#### Newlands.

During the week ending October 15 the maximum temperature recorded was 84, minimum 32, and precipitation 0.0 inch.

The plats that were not irrigated the previous week, H8 to H25, inclusive, and all of B and Y, received their last irrigation for the season. Plats E4,5 and 6, having been previously irrigated, were plowed.

The general work of repairing bridges and painting the buildings was continued. As this is work that is being done when other work is not demanding attention it will be some little time before it is finished.

On Wednesday and Thursday of the week, two men were sent to the local deposit of alum at the Lahontan dam and mined and screened a ton of alum which was hauled to Hazen and shipped to Huntley, Montana. This alum was chosen from places where the percentage of soluble substance was thought to be highest and was then put through a one-fourth inch screen to remove all rocks, etc. The resulting product should be a higher grade than any heretofore mined.

The alum and gypsum experiments are giving quite a little encouragement in their appearance. That on Mr. Heizer's place shows some beneficial effects of gypsum, but not to such an extent as the alum treated plats. On the latter named the top soil, from being a hard cemented checked area, has become loosened very much. In fact, a real fine mulch could be worked easily upon its surface at present. As it still holds a little moisture this should be better at a later date. Mr. Heizer states that it is seven feet through the adobe to sand in the place this experiment is being conducted. It is the intention now to make borings throughout this treated area to gain an idea of the depth the water has penetrated.

The treated plats on Y5 and Y11 on the experiment station are at the present time too wet to show any beneficial effects. Here the soil has more of a cement character and ranges from 2-1/2 to 3 feet in depth before sand is encountered, so with these two experiments there will really be found the effect of alum on a heavy adobe soil and on a cement variety.





San Antonio.

During the week ending October 15 the maximum temperature recorded was 89, minimum 43, greatest daily range 31, and precipitation 0.2 inch. The days were mostly clear with a north to north east wind prevailing throughout the week.

All orchards except E4 was disked. The cotton plat on Mr. Herbst's farm, also portions of fields A3 and C5, were plowed. All rotation plats to be planted to oats, except those now in cotton, were disked. Sudan grass and sorghum hay, which was mowed the preceding week, was hauled to the stack-yard in good condition.

Hand labor was devoted to general weeding and chopping of Johnson grass, care of grounds and buildings, and painting the office building.

Messrs. Cook, and H. H. McNamara, of the Office of Crop Acclimatization, arrived at the station the morning of October 6 and left the same night for Corpus Christi, Texas, accompanied by R. D. Martin, who arrived at the station October 5. Messrs. Cook and Martin returned to the experiment farm October 12 after having made a trip of inspection through the Lower Rio Grande Valley.

Scottsbluff.

( No report received ).

Umatilla.

( No report received ).

Yuma.

The maximum temperature for the week ending October 15 was 101, minimum 55, and greatst daily range 44.

The daily temperatures and humidity during the week were quite high. The weather, however, is ideal for harvesting the cotton and grain sorghum crops on the project.

The breaks in the main canal have been repaired and water was turned into the laterals the latter part of the week.

Work on the station consisted of harvesting cowpea and soy bean varieties; plowing plat variation borders, C32 to 35; repairing buildings, and general cultivating and hoeing.

Demonstrations on Reclamation Projects.Minidoka.

( No report received ).

Newlands.

The week ending October 15 was largely taken up with consultations with parties interested in the importation of dairy cattle and with herd testing work. The stimulus that dairying has received this fall has



Newlands (continued).

caused many people now having dairy herds to become interested in herd testing work. It is gratifying to note that ranchers who heretofore have taken little or no interest in dairying and who have in many instances been antagonistic to the dairy industry, are beginning to appreciate the steady and profitable returns that are being made locally by dairy herds.

The month of October will no doubt show the largest number of herds tested by this office up to date and it is hoped that the report of this month's herd testing work will serve to further stimulate herd testing and increase interest in dairying on the project.

Assistance was rendered in diagnosing ptomaine poisoning in a large flock of laying hens. This trouble was due to allowing the poultry to have access to decayed dressings from wild ducks. The egg yield dropped to almost nothing and a number of the chickens died. With the cleaning up of the premises the flock was gradually brought back in condition.

During the week 43 calls for assistance were received and visits were made to 6 farms.

Shoshone.

During the week ending October 15, nineteen requests for assistance were received and seventeen farm visits were made.

The number of farmers agreeing to keep milk records was increased to 6, and three were found who wish to keep poultry records. Information was furnished to these and two demonstrations of records were made.

A buyer of stock hogs from Nebraska visited the project during the latter half of the week and some assistance was given to him and to farmers who had hogs for sale. He is offering six cents for hogs up to 125 pounds. At the end of the week he had not yet succeeded in buying enough to make a car load.

An unusual request came to the office on Monday. Mr. Hecht, a Roumanian by birth, and a successful farmer, with a few of his friends who also live on the Shoshone project, wish to secure information and assistance from the Department of Agriculture and the Department of State looking toward an importation of a carload or more of milking sheep from Roumania. The plan is to care for the sheep on their farms during the winter and on the range during the summer, manufacturing and selling Roquefort cheese. Apparently Mr. Hecht has considered the proposition carefully and he states that he has had experience in all phases of the industry. His conclusion is that it will pay if the cost of transporting the animals is not too great.

Uncompahare.

Nearly half of the week ending October 15 was spent in the office catching up with back work, including several weekly reports.

Since the visit of Mr. Jameson, State Poultry Specialist, numerous requests for poultry culling have been received. Six flocks have been culled this week and several other requests are on file. As soon as these have been taken care of the work will probably be stopped for the present. It is hoped that a more or less general campaign can be made later.





Uncommahere (continued).

Officers of the local bull association were visited to see what should be done regarding a bull, Loesch Brothers having recalled a bull leased to the association. It was agreed to wait for a week or so until work is not so pressing and call a general meeting to decide what should be done. The bull which the association has been using has been leased to C. C. Wortman of Olathe to use in a herd of purebred Holsteins. Mr. Wortman bought a young bull at Loesch Bros' sale with the privilege of leasing the old bull until the other is ready for service.

Mr. Daniels, who runs a large dairy at Telluride and supplies the town with milk, is looking for a place in the valley where he can keep all but a few of his cows, planning to ship the milk back to Telluride which is a mountain mining town. Mr. Daniels wants to buy silage or beet pulp and secure shelter for about 70 head of cows. Some assistance was given him this week but he has not yet found what he wants.

Milk River.

During the week ending October 15 the weather records at Malta showed a maximum temperature of 75 and minimum 26.

The week was given over largely to making up reports and recommendations on various propositions asked for by the project manager. Recommendations were completed with reference to agricultural lands that should be included or excluded in the irrigable area of the project. A report was also submitted consisting of a brief summary of work farmers have asked for of the Reclamation Service that is thought will be helpful to them in getting water on their lands.

Two days was spent in the field locating and staking out field ditches and drain ditches on 80 acres. A complete system was layed out and one day was then spent in the office mapping up this field which is located in a vicinity where very little irrigation work is being done and it is hoped that this map can be used as a general plan on farms of similar topography.

Harvesting work is about completed on the project at this writing and farmers are getting well started with their fall plowing. Fifteen carloads of potatoes were shipped from Chinook during the week at an average price of \$1.25 per cwt. Good alfalfa hay is offered for sale from \$3.00 to \$8.00 per ton but very little is being moved at that price. Wheat was worth 93¢ and 57¢ per bushel for #1 hard and #1 soft, respectively, at Malta the end of the week.





# WEEKLY BULLETIN

Of the Offices of

WESTERN IRRIGATION AGRICULTURE  
and  
DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

October 29, 1921.

No. 18

## Western Irrigation Agriculture.

### Belle Fourche

( No report received )

### Huntley

Weather conditions continued favorable for field work during the week ending October 22. The harvest of sugar beets on the project was practically completed. This work was continued without interruption due to stormy weather since it was begun in September. The work of loading piled beets at the various loading stations was begun. The amount of beets piled is unusually large because of the favorable harvest season.

Because of drought conditions that have prevailed during the fall season, fields on many parts of the project were irrigated during October. Alfalfa, both old fields and new fall seeding and pastures as well as grain stubble were irrigated during the past two weeks.

Field work at the experiment farm consisted of plowing, husking corn, and irrigating pastures and alfalfa.

Good weather continuing, the plowing of the rotation plats will be finished in a couple of days next week. A large part of the last week was spent in husking the corn from the rotations. This completes the harvest from the rotations.

### Newlands.

The maximum temperature for the week ending October 22 was 85, minimum 35, and precipitation 0.0 inch.

The treatment of the different plats was continued when other work was not demanding attention. Plats F6 and F11 received a dressing of manure at the rate of 15 tons per acre, while plats D2 and D6 were treated with gypsum at the rate of 2,000 pounds per acre.

The sugar beets this year were almost completely destroyed in some cases and in other were so badly stunted by an infection of curley top that it was hardly worth the trouble of harvesting. Plats E7, E8, and H3 were completely destroyed by the disease and D6 yielded 1,475 pounds of beets or a yield of 2,731 pounds per acre.

Several visits were made to Mr. Heizers place and notes taken on the alum experiment which is being conducted there. Holes were bored with a soil auger to determine the depth to which the water had percolated. Following are the results:





Newlands (continued).

Plot	Depth of holes.
Check.....	6 inches.
Check....	6 "
Dynamited .....	8 "
Dynamited .....	9 "
Gypsum and dynamite.....	16 "
Gypsum and dynamite.....	14 "
*Alum and dynamite .....	4-1/2 feet
*Alum and dynamite .....	4-1/2 "

\*The length of the soil auger was 4-1/2 feet. Soil still damp.

At the point in each case where the soil became dry it was impossible to force the auger to a greater depth. It is our belief that in the case of the alum treated plats the soil would be damp and easily drilled to the underlying sand at a depth of seven feet. This first drilling took place October 17 and on October 23 another trip was made with comparatively the same results.

San Antonio.

The weather for the week ending October 22 was clear and dry, being ideal for all field operations. The maximum temperature recorded for the week was 91, minimum 47, and greatest daily range 35. No precipitation occurred.

The cotton-leaf worm (Alabama argillacea), which first appeared on the station about September 25, has completely defoliated practically all cotton plants. This condition obtains quite generally throughout San Antonio region although there are small areas in some fields where little evidence of the worm can be seen.

Farm work consisted of disking fallow on fields B3, C3, and D3 and all fallow plats in the rotation fields; mowing weeds and Johnson grass on A3, B3, C3, ABC7 and pasture E4; grading farm roads; and general weeding of roads, orchards and fields.

Scottsbluff?

The following dairy report for the month of September was submitted by Mr. Holden:

Cow	Milk	Test	Butterfat	Silage	Grain	Notes.
	Pounds		Pounds	Pounds	Pounds	
Marie....	1090.8	2.6	28.34	790	240	
Bess ....	1253.7	3.1	38.84	790	270	
Queen....	766.5	3.5	26.81	685	240	
Stinne...	465.8	3.4	15.81	685	210	
Ellen....	471.5	3.7	17.42	635	210	
Sarraha...	726.6	3.1	22.50	755	240	
Colantha	203.9	3.5	7.10	790	336	Freshened during month.
Beauty...	Dry	....	....	735	84	
Heifer...	43.3	....	....	735	...	Dried up during month.
Quality..	671.3	3.4	22.81	790	240	
Goldie...	739.3	3.2	23.64	735	240	
Maude....	Dry	....	....	790	88	
Eva.....	Dry	....	....	735	88	





Umatilla.

( No report received ).

Yuma.

The maximum temperature for the week ending October 22 was 103, minimum 52, and greatest daily range 51.

High daily temperatures during the week are breaking October records at various points in the Southwest. A temperature of 103, was reported from Indio, 104 at Riverside, and 99 at Los Angeles. The nights are fairly cool which gives a considerable daily range in the temperature. This range on Friday, October 21, was 51.

Station work performed during the week consisted of plowing plats 029 to 33; harvesting Indian Corn, 019 to 26; threshing cowpea varieties; repairing farm buildings, and general irrigating and cultivating.

Friday and Saturday were spent in attending the Date Festival at Indio, California.

Demonstrations on Reclamation Projects.Newlands.

During the week ending October 15 there were received 38 calls for assistance and visits were made to six farms. Herd tests were made for five different farms. Plans were discussed for one dairy barn and one tank house, which was also to be used for milk house and pump house.

During the week a working plan for operating a dairy on shares was drawn up. This plan provides for 100 dairy cows on 200 acres of alfalfa hay. There are several plans in operation in this valley at the present time whereby the landowner supplies the dairy herd and necessary equipment and the second party provides all necessary labor to operate the farm or the dairy, and the division of the profits are on the basis of half and half. This plan is looked upon with favor because it leaves the landowner free to operate his farm and put in new land, and also leaves the dairyman with his entire time to devote to the herd.

During the week a demonstration was made on one ranch for the purpose of demonstrating pregnancy in dairy cattle.

Shoshone.

During the week ending October 22 eight farm visits were made and 19 requests for assistance were received.

Efforts to find farmers who will keep poultry and dairy records were continued with some success. A visit relating to a proposed shipment of stock hogs was made to Deaver. However, the price offered was not satisfactory to owners. One day was spent in the neighborhood of Frannie assisting men who filed on land recently opened for settlement to secure information about the soil, how to prepare it for cropping, and how to irrigate. A number of bulletins were distributed. It appears certain that the number of such men is as large as the number who are remaining during the winter on claims taken last year, and there are not more than a dozen in either class. The remainder are elsewhere working or looking for work.





Shoshone (continued).

The buyer of stock hogs mentioned in last week's report finally secured a carload by offering 7 cents for the number he lacked.

A successful demonstration of the proper storing of potatoes in cellars and loading in cars was conducted Tuesday afternoon and evening by Mr. Earle Reed, Agriculturist for the Burlington Railroad Company, assisted by another official of that company and a potato expert from the Wyoming Agricultural College.

Uncompahgre.

Requests for poultry culling continued to come in during the week ending October 22. Six flocks having been culled this week besides a number culled by Mr. King, and several requests are in for next week.

Mr. Heppe, representing the State Extension Office and the U. S. Bureau of Markets, visited the Project to make tentative arrangements for wool grading demonstrations later in the year. It is hoped that sentiment in favor of grading all wool can be created and that ultimately a state-wide pool can be organized.

Director McCann, new head of the State Extension office also visited the county and project this week to confer with the county agent and project agriculturist regarding the local work. Tentative plans are being made to schedule the state specialists a year in advance so that local agents can make their plans accordingly.

Several visits have been made to men who have cows for sale or who want to buy cows. The cows offered for sale, however, are not generally desirable. There is still some talk of importing a number of cows but nothing definite has developed.

Milk River.

During the week ending October 22, meteorological data were recorded as follows: maximum temperature 79, minimum 23, and precipitation 0.0 inch.

Two days were spent in the field, one on Wm. Mann's farm at Malta, and one on Paterson & Fitzgeralds farm at Glasgow, giving help with proposed changes in their irrigation systems. The balance of the week was given over to cooperative work in connection with the prospective opening of lands on the project by the Reclamation Service. Two meetings were held the forepart of the week, one at Glasgow and one at Malta. Mr. Henry, Consulting Engineer for the Reclamation Service, was in attendance to investigate conditions relating to complaints against the project management and requests for announcements of construction costs per acre, set forth in a number of resolutions drawn up by organizations representing the settlers on the project. This office was called on for information regarding the agricultural conditions of lands on the project and for estimates of time and money required to subjugate some of the heavy lands under irrigation. It is thought that some of the heaviest gumbo land on the project should probably be temporarily excluded from prospective settlement and an effort made to settle up the best lands first.



Milk River (continued).

In order to make it possible for the Reclamation Service to exclude certain lands, an immediate soil survey and land classification will be conducted by this office. It is estimated that the time required to complete this survey will be about three weeks in the field and perhaps ten days in the office.





# W E E K L Y   B U L L E T I N

Of the Offices of

WESTERN IRRIGATION AGRICULTURE  
and

DEMONSTRATIONS ON RECLAMATION PROJECTS.

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Vol. XIX

November 5, 1921

No. 19

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## Western Irrigation Agriculture.

### Huntley.

( No report received ).

### Newlands.

General fall work was continued during the week ending October 29. Plats B9 and 10, and E8 received a dressing of manure. Alfalfa on D2 and 6, and E6 and 11 was plowed under in preparation for the rotation plan of next year. Painting was continued on the farm buildings and general repair work to the irrigation system was continued. It was necessary to repair a couple of drains and put in some new irrigation boxes.

### Alum Experiment on Y11.

This type of soil seems to work somewhat differently from the soil encountered at Mr. Heizers. The surface has obtained a fine mulch where treated, but is hardening and cracking in the checks. Holes bored through to the underlying sand at a depth of 2-1/2 feet showed that the water had penetrated through in both the treated and untreated plats. The treated soil though showed a better texture and upon drying it will most probably lose quite a little of its cementing qualities, not only on the surface but throughout its depth. The weather has been so cool that the soil is much slower in drying than it otherwise would have been if the treatments had been applied in the summer months.

### San Antonio

( No report received ).

### Scottsbluff.

Under date of October 31, Mr. Holden wrote as follows concerning conditions on the station and on the project:

"The weather during the past month was ideal for harvesting potatoes and beets. During the whole month beet help lost but one day. The weather has been so mild that it has not been necessary to cover topped beets that were left in the field over night. The maximum temperature for the month was 84, minimum 23, and precipitation .93 inch, which fell on the 26th. This is the only rain since September 19.

1975-1976

# 1975-1976

1975-1976

1975-1976

Scottsbluff (continued).

"All potatoes were harvested in very good condition. More potatoes have been shipped out of the valley than at this date last year. Due to tight money, many farmers are selling rather than take a chance on the future market. The price of potatoes broke about ten days ago. At that time they were selling at \$1.50 per cwt. There has been very little selling since the break. In fact, buyers did not want them at any price. The market is showing signs of picking up at this writing.

"Many of the farmers have already completed their beet harvest and many others will finish this week. Beets are yielding considerably better than last year. The farmers have done most of their work themselves this fall. I believe most beet farmers will have more clear money this year from their beet crop than they did last year even though the price of beets is little more than half of last years price.

"Labor has been very plentiful this fall at a much lower wage than last year.

"The financial condition does not seem to be improving very fast. The potato and beet money has stimulated business in the towns to some extent but the bankers take the attitude that now is the time to pay debts rather than contract more.

"The vote on the supplemental construction for an additional charge of \$16 per acre to cover the construction of the Gurnsey Reservoir and enlargement of main canals carried. It is understood that construction work on the Gurnsey Reservoir will not begin before July 1922.

"It is a little early yet to say just how much feeding will be done in the valley this winter. The indications are, however, that it will be light, even though feed is very much cheaper than it has been for years. Hay is selling for \$5 and \$6 per ton, beet tops for around \$2 per acre, dried pulp \$15 per ton, and corn in car lots as low as 70 cents per cwt.

"As yet nothing has been done with reference to the dairy work. The Dairy Department of the University seems to be afraid that if we inaugurate the proposed bull work that it will kill the cow testing association that has just been started here in the valley. Professor Davis has not been out here yet.

"I am going to Denver within the next ten days or two weeks to buy a car of lambs for experimental feeding. We will duplicate last years feeding test."

Umatilla.

( No report received ).

Yuma.

The maximum temperature for the week ending October 29 was 97, minimum 38, greatest daily range 58, and precipitation .03 inch.

Lower temperatures with several days of high winds were recorded during the week. A light rain occurred on the 24th instant.

Farming activities on the project at this time of the year consist of harvesting the cotton and grain sorghum crops. Picking prices for cotton are now ranging from 1-1/4 cents to 1-1/2 cents for Upland types and 2-1/2 cents for Pima. The supply of pickers is short at present.





Yuma (continued).

Work on the station consisted of harvesting grain sorghums, B7-to 16, and A24; husking Indian corn plats, C19 to 23; threshing Brown Kaoliang, B23; hauling cowpeas, A24 and E7 and 8, and general irrigating and cultivating.

Messrs. Marshall and Herbert from the Chula Vista, California, station were visitors at the farm during the week.

Demonstrations on Reclamation Projects.

Much of the time during the week ending October 29 was devoted to herd testing. Ten herds were tested, including 110 animals. This finished up the herd testing work for October. Results of the herd testing for October will be reported in the local papers the first week in November. These herd testing reports seem to be stimulating considerable interest in herd testing and in dairying generally. Herd testing for October shows an increase over any previous month. Nineteen herds, including 214 animals, were tested. The average production of these cows for October is estimated from the test to be 28.6 pounds.

The local sugar factory began operations on Wednesday the past week. This day was set apart by Fallon as a time for celebration. All business houses were closed during the afternoon and the people congregated at the sugar factory where a program was rendered and refreshments served. The governor of the state and other persons from out of town made speeches. The sugar beet crop in the valley this year will show a very light yield. The acreage was considerable, but curly leaf is held responsible for the loss of crop. The other valleys of the state, however, have grown beets this year which will be shipped to this factory.

There were received during the week 43 calls for assistance and 10 farms were visited in response to calls.

Shoshone.

During the week ending October 29, seven farm visits were made and 23 requests for assistance were received.

Two requests from sheepowners for assistance in finding locations for wintering sheep on the Shoshone Project came to the office, one of which was from a man living in Yellowstone County, Montana. Numerous conferences with farmers and sheep owners and a few visits to farms led to agreements under which about 2,000 sheep are to be fed by project farmers from October 1, 1921 to April 1, 1922. A trip was made to Cody with one farmer to assist in selecting 900 ewe lambs. These are to be fed 5 months for \$2.00 a head.

A committee previously appointed by the Powell Commercial Club met at the Agriculturist's office Monday to consider the feasibility of importing dairy stock and decided to encourage the purchase of calves particularly, it being the view that the purchase of any considerable number of mature animals cannot be financed at this time.

Work on the proposed production demonstrations was continued. Milk sheets and instructions as to use were distributed to eight owners of cows, and record blanks with instructions were placed in the hands of four poultry keepers.





Uncompahare.

Eleven small flocks of hens were culled during the week ending October 29, totaling 460 hens. The culls total 202, or nearly 44 per cent. The percentage of culls in the various flocks varied from 25 to 64. In most cases neighbors of owners of flocks being culled are present to watch the work, everyone present being asked to handle the hens. When practical, the owner is asked to pass on the hens himself.

Parts of several days have been taken to assist in the location and selection of cows and breeding hogs. No cows have been purchased as very few that are offered for sale are at all desirable. Four Duroc-Jersey boars have been selected and purchased, one of the best going jointly to two club boys which have been in pig club work for two years. Three of boars came from Clements' herd at Paonia and one from Southwell's herd at Olathe. They are all young stock. Prices are low, Clements offering the choice of his spring boars at \$40.00.

Milk tests were run on two herds that have been on regular monthly test.

Work was started on a proposed winter poultry show at Montrose. This is needed but may not prove feasible for this year.

Arrangements were made with the Reclamation Service for a livestock census to be taken in connection with the annual crop census.





WEEKLY BULLETIN  
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November 12, 1921.

No. 20

Western Irrigation Agriculture.

Belle Fourche.

( No report received ).

Huntley.

( No report received ).

Newlands.

The maximum temperature for the week ending November 5 was 75, minimum 23, and precipitation 0.0.

During this period the general fall work was continued. The painting of the roof of the office, laboratory and barn was undertaken and completed. It was found necessary to commence work on cleaning the irrigation ditches before the ground becomes frozen. Many of the ditches had become overgrown with weeds and an accumulation of sand and it was necessary to dig quite a little from the sides and bottom to enable them to carry a full head of water. Plats E7 and 8 were plowed.

The farmers on the project are becoming more interested in other crops besides alfalfa. There have been numerous calls made at the station for soil analysis to be made of various farms to show their suitability for the profitable growing of other crops. Much time has been spent in the field along this line.

Two trips were made to the alum mine at Lahontan Dam with other men of the project. The reason for taking this trip was to enable the station to make an estimated cost to the government of mining and hauling 150 tons to the experiment station. The men who made the trip were all mining men with much experience in mining and hauling similar ore. A safe estimate in their opinion was a rate of \$14 to \$15 per ton mined and delivered to the station.

Demonstrations on Reclamation Projects.

Minidoka.

The greater part of the week ending November 5 was spent with Mr. A.C. Cooley, in charge of Demonstrations on Reclamation Projects, looking over the reports of the work accomplished this year on the Minidoka Project and the preparation of plans for the work to be carried on during the winter months.

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1917-18-19



Minidoka (continued).

A great amount of time has been spent in the collecting of material and studying the plans and work done by Mr. Sheppard, Manager of the Twin Falls North Side Irrigation District, in the securing of finance from the War Finance Corporation for financing the purchase of quality dairy cows for the Minidoka project. Meetings are now being held in Rupert and Burley for the purpose of organizing a local corporation through which to secure a loan from the War Finance Corporation. It is hoped that sufficient finance will soon be obtained for the purpose of purchasing several thousand cows for the Minidoka project.

Newlands.

Twenty five calls for assistance were received during the week ending November 5, and visits were made to two farms.

The alfalfa hay marketing situation has changed considerably during the last week. Due to lack of rains in California hay buyers have come into this valley for alfalfa hay. The first hay sold in this valley a month ago at \$8.00 per ton f.o.b. Recent prices have been as high as \$10 a ton for first class hay. The bulk of recent purchases has been for Los Angeles territory. Ten dollars a ton, f.o.b. cars, will net the grower about \$6 to \$6.50 per ton in the stack, and in some cases less, depending on the distance from loading point. Only a few sales have been made as high as \$10 per ton. A large per cent of our best hay has been sold at the low prices. At the prices so far offered for alfalfa hay, returns cannot compare with those being received by the dairymen of the project. It was estimated from the October herd tests made by this office on nineteen herds, including 212 producing cows, that an average of \$28.05 was received in dairy products for each ton of hay used even after deductions were made for hay consumed by the dry animals in each herd.

Herd testing work consumed considerable time during the week. One article was contributed to the local papers to stimulate hog production on the project. Some time was devoted to the selection of dairy cattle within the project.

Shoshone.

During the week ending November 5, six farm visits were made and 23 requests for assistance were received.

The digging of potatoes and beets is finished and satisfactory progress is being made with fall plowing. It is estimated that 400 carloads of potatoes were produced on the Shoshone project, of which 150 have been sent to market, 70 are in storage at the Powell Potato warehouse, and the remainder are in storage on farms.

The work during the week was chiefly in relation to dairying and the demonstrations begun November 1. On the 3rd of the month, a sheep sale at the "Two Dot" ranch, 18 miles northwest of Cody, Wyoming, was attended with four farmers from the vicinity of Powell. About 18,000 head were sold. Weather lambs brought \$3.60 per cwt., and ewe lambs \$5.00 per cwt. About 13,000 breeding ewes were sold at \$7.15 per cwt., including camp horses and equipment. This ranch had been stocked, after the war, with ewes costing \$14 per head. Most of the animals sold on the 3rd are to be





Shoshone (continued).

taken to another part of the state, but arrangements were partly made immediately after the sale towards wintering 3,000 on project farms.

Uncompahgre.

Some time was given during the week ending November 5 to locating cows for men who wanted to buy. The demand for cows is not developing as was expected and cows are being offered for sale faster than they are sold. Some of these are not very desirable while others are pretty good animals. Prices asked range from \$50 to \$110. The drop in the potato market has probably been partly responsible for the lighter demand for cows. Potatoes have been quoted at only \$1.00 per cwt. for some time and lately have dropped to 75 cents. Most of them dug since the drop have been stored and money expected for the crop is still in prospect only.

One day was spent in conference with the county agents of Montrose, Mesa, and San Miguel counties, State Livestock Specialist, and Assistant State Leader of County Agents. Several livestock projects were discussed including poultry shows, sales of purebred livestock, and purebred bull associations among range cattlemen. The extension office plans to make out schedules of specialists as far in advance as possible and district conferences of extension workers once in three months are suggested to harmonize local workers' plans with these schedules.

Arrangements were made during the week for the annual meeting of the purebred livestock breeders association at Montrose, November 14.



W E E K L Y   B U L L E T I N

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Vol. XIX.

November 19, 1921.

No. 21

Western Irrigation Agriculture.

Belle Fourche.

( No report received ).

Huntley.

( No report received ).

Newlands.

( No report received. )

San Antonio

During the week ending October 29, the following meterological data were recorded: maximum temperature 89, minimum 35, greatest daily range 46, and precipitation 0.0. Evidence of a light frost were visible on the lower-lying plats at the south end of fields A, B, and C on the experiment farm and in a few local areas throughout the region on the morning of October 29. No damage of consequence was observed.

Sumac sorghum, both from 4.1 foot row plantings and 8" drills, was harvested from rotation plats during the week. Oats were seeded in the pasture lot and fields AB8 and C4 were disk harrowed in preparation for seeding small grains.

The second, and last, picking of cotton from rotation plats was started during the week. The plants have not yet been damaged by frost but have been so thoroughly defoliated by the cotton leaf-worm that the few remaining green bolls are not maturing. The final count of plants dead from root rot on all plats was made, also a diagramatic location of all effected areas was completed.

Climatic conditions remained ideal for farm work during the week ending November 5. The maximum temperature recorded was 80, minimum 39, greatest daily range 39, and precipitation none. There is very little available moisture in the upper soil and all small grain plantings and pasture lands are badly in need of rain.

Farm work during the week consisted of seeding a mixture of oats and rye in the lot east of the farm buildings used for pasture; hauling manure for a compost pile and to be applied to rotation and tillage plats; plowing of rotation plats, and picking cotton from the varietal and time-of-planting tests on field C6.





Scottsbluff.

( No report received ).

Umatilla

( No report received ).

Yuma.

( No report received ).

Demonstrations on Reclamation Projects.Minidoka.

( No report received ).

Newlands.

On Monday of the week ending November 12, a visit was made to Reno, Nevada to confer with the State quarantine officials regarding more strict regulations for the importation of dairy cattle from California into Nevada. Very strict regulations affecting importation of dairy cattle into this state have been made since this visit. The work of unscrupulous veterinarians in California in issuing certificates for interstate shipment of tubercular cattle into this state is the cause of the recent action.

During the past week some time was devoted to an endeavor to stimulate swine production in the valley. One article was contributed to the local paper on the subject. The discouraging condition for swine production that prevailed during the war, when grain was almost prohibitive in price and in many instances could not be used under any conditions for stock feeding, have caused a great falling off in the number of hogs grown in this valley. The supply of hogs grown on the project is just about sufficient for the local meat shops furnishing fresh pork. Old cured meats are shipped in from the outside. With a prospect of cheap grain and a fair price for hogs, swine production should seem attractive to local ranchers.

The alfalfa hay marketing situation is gradually improving in this valley. There have been reports of \$11.00 per ton f.o.b. for third crop alfalfa hay. There is every prospect that there will be a large number of beef cattle fed in the valley this year. The Southern Pacific railroad reports more cars of cattle shipped into the project this fall than during the entire feeding season last year. There have been very few sheep brought in this fall for feeding purposes. A few of the ranchers who are able to hold their hay feel justified in waiting for higher prices.



Shoshone.

During the week ending November 12, seventeen farm visits were made and 19 requests for assistance were received.

The Powell alfalfa mill began grinding November 7, having contracted 3,000 tons at \$5.

Dr. T. J. Dallas, veterinary inspector, Bureau of Animal Industry, with one assistant and Dr. Good, a Wyoming inspector, came to Powell Thursday to make a tuberculin test on all the dairy cattle on the project. Assistance was given to them in the way of advertising and districting the territory. One meeting was held at Powell at which the plan of work was explained and instructions given.

Live stock work also included many conferences and several farm visits relating to a proposed importation of heifer calves of dairy breeds.

Uncompahgre.

Three trips were made during the week ending November 12 with men who desired to purchase cows. Seven head were bought as a result of the trip. The expected demand for dairy cows has not developed to any great extent, the local supply more than taking care of the demand up to date.

Returns from the 1920 wool pool were sent out this week by the men chosen to act as treasurers for the Montrose and Delta shipments. This wool was consigned last July to the C. J. Mustion Wool Commission Company, of Kansas City, who prepaid freight charges and gave four months free storage, after which time they charged 15 cents per bag per month storage and 5 cents per bag per month insurance.

The wool was sold November 1 to a wool scouring mill, on the basis of grade. Prices received ranged from 5 cents per pound for burry wool and 7 cents for braid to 22 cents for the best quality of half-blood and three-eighths. While these prices are low they compare favorably with those received recently for 1921 wool consigned to Boston. Commission on the wool was 2-1/2 cents per pound, freight was nearly 2 cents and storage and insurance was about 1 cent. No interest was charged on the freight advanced.

This wool was graded more than a year ago. Much of it was low in quality and most of it had been very poorly handled.





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November 26, 1921.

No. 22

Western Irrigation Agriculture.

Belle Fourche.

( No report received ).

Huntley.

( No report received ).

Newlands.

The remaining carrots and onions were harvested and stored in the cellar for winter use during the week ending November 19.

General fall work was continued. The ground which is to be put into garden next year was manured and plowed. This ground consists of the north end of plats B7 to 15, inclusive.

The painting was continued on the barn and some of the outhouses until the weather became too cold. Then two men were put on the cleaning out of irrigation ditches and repairing of boxes.

San Antonio.

Dry, rainless weather continued throughout the two weeks period ending November 19. A precipitation of only .91 inch has been recorded since the last of September, and this occurred in six widely separated showers which were of no real value. All fall sown small grains in the San Antonio region are in a precarious condition. Temperatures above normal have prevailed. Meteorological data as follows were recorded: maximum temperature 90, minimum 41, greatest daily range 48, and precipitation .01 inch.

Cotton picking throughout the region has practically been completed. All cotton on the experiment farm has been gathered and the fields are now being cleared and plowed. An average yield of 504 pounds seed cotton was obtained from the thirty rotations and tillage plats, as shown in the following table:



San Antonio (continued).

Table I.- Yields of seed cotton per acre, San Antonio Experiment Farm, 1921.

Plat No.	Seed cotton, per acre <u>Pounds.</u>	Plat No.	Seed cotton per acre. <u>Pounds.</u>
A4-1.....	170	B5-3.....	273
-7.....	465	-4.....	159
-14.....	448	-9.....	476
-18.....	469	-11.....	329
-19.....	224	-17.....	443
A5-2.....	589	B6-2.....	529
-5.....	614	-4.....	478
-8.....	541	-6.....	369
-10.....	600	-8.....	842
-12.....	497	-10.....	684
-14.....	714	-12.....	509
-16.....	630	-14.....	441
-18.....	844	-16.....	472
A6-3.....	348	-18.....	420
Average.....			504

Small grain plantings were made as follows: variety test in one tenth acre plats on field C4; rust investigations plantings of eight varieties in one-twentieth acre plats on field A3; seed increase planting of Selection 1913 oats on fields C3 and D3, seed increase planting of Texas Winter rye, Texas Winter barley, and Ferguson's No. 71, oats; on field AB8; Texas Red Rust Proof oats on sixteen rotation plats; and Texas Winter rye for green manure on rotation plat B6-17. McAdoo field peas were seeded on six rotation plats.

Other farm work during the period consisted of mowing and burning cotton stalks, plowing rotation plats, building a rabbit-proof fence around the farm garden, and general clean-up of grounds and corrals.

Mr. C. S. Scofield arrived at the station November 12 and left for points in the west the night of November 14. During the same three days we enjoyed a visit from Mr. F. D. Farrell, Dean and Director, Kansas State Agricultural College.

Demonstrations on Reclamation Projects.Minidoka.

The greater part of the week ending November 19 was taken up with consultations and the formulating of plans for the use of War Finance Corporation funds for the purchase of quality dairy cows. If the present plans now being worked out by the livestock loan association are put in operation, there will be purchased from five hundred to a thousand head of dairy cows





Minidoka (continued).

and heifers from the cow testing associations in Wisconsin. This is to be the foundation stock for the future dairies of the Minidoka project.

During this week the wool pooled by the Minidoka and Cassia County Wool Growers' Association, a total of 37,072 pounds, was sold and shipped to Webb and Sons, Philadelphia, for the following prices; fine, 16 cents; medium, 15 cents; and coarse, 13 cents. This is from three to five cents a pound more than the local buyers have been paying.

Newlands.

Thirty-one calls for assistance were received and six visits were made to farms during the week ending November 19.

There has been considerable anxiety among the farmers of the Newlands project over the presence of alfalfa weevil in Washoe County, sixty miles west of Fallon and only thirty miles west of the Fernley district of the project. Only a small area was infested around the race track in Reno, a year ago, but now the infestation has spread over a distance of five miles from where it was originally. Since the Newlands project is in the direction of prevailing winds from this infested area as well as receiving much of drainage water from this district, the prospects are that infestation will reach this district very soon. It is practically impossible to keep it away more than another two or three years at the most.

The state of California has already quarantined three border counties, one of them Washoe county, where the weevil first appeared, and two adjoining counties into which Washoe hay has been taken. Precautions were not taken to quarantine the infested area sufficiently. Hence the state of California found it necessary to quarantine an additional area in Nevada. In case there is a good crop in California next year, it is expected by Nevada hay growers that the quarantine area will be greatly enlarged if not made to cover the entire state. It is the purpose of the Newlands project farmers to prevent the spread of this quarantine to this district as long as possible, with the hope that two more years crops can be marketed into California. It is the object of this office to impress as much as possible the gravity of the situation and assist the ranchers in fortifying themselves by means of dairying, hog production and generally a more diversified cropping system.

If the project farmers grasp the situation and take immediate steps to go into more livestock and vary their cropping system, there will be very little hardship, but it is expected that it will take much effort to bring about a change in the farming system, before a general infestation of weevil overtakes the valley.

During the past week some time was devoted to herd record work. Additional dairymen are showing interest in herd testing. One article was contributed to the local paper on herd record work for October. Several conferences were held with project dairymen relative to the exchange of dairy cattle within the project, and with three dairymen contemplating the importation of dairy herds. One project farmer left for California to import a herd of registered Avyshire cattle into the project.

The article which was contributed to the local papers two weeks ago on swine production has stimulated some interest and inquiries, and it is expected that the swine production program will be put on by several farmers.



Shoshone.

During the week ending November 19, twenty-seven requests for assistance were received and 8 farm visits were made.

F. P. Lane, state county agent leader, visited the project Friday, at which time he was to address a meeting of farmers preliminary to the organization of local Farm Bureaus. As a blizzard was in progress, no meeting took place and no further effort to organize will be made until better weather is in prospect.

Tuberculin testing continued throughout the week, the work being not yet half done. Thirteen reactors belonging to 7 owners have been found.

A proposed shipment of sheep; work with the committee on dairying relative to an importation of Holstein heifer calves, and testing milk samples took up most of the time.

Uncompahare.

The third annual meeting of the Western Slope Purebred Livestock Breeders' Association was held in Montrose on Monday of the week ending November 19. There was a good attendance, including 25 Grand Junction farmers from 70 miles distant. Luncheon was served at noon by the Montrose County members. After election of officers and the transaction of routine business, discussion of questions of general interest including a sale and show of purebred livestock was held. A committee was named to decide upon the proper time and place for a sale and show although sentiment was not favorable to a sale or show before next fall. The meeting was very satisfactory.

Three poultry meetings were held with state poultry specialist Jamieson. When Mr. Jamieson was here in September giving culling demonstrations, requests were made for return dates when feeding, housing, etc. might be discussed. One meeting was arranged in Delta and two in Montrose county, personal announcement of the meetings being sent to poultry breeders and others. Attendance at all the meetings was very poor, presumably on account of unfavorable weather, but a very good interest was shown by the few who attended.

E. C. Dunlap, two of whose children have been members of the pig club for the past two years purchased a Duroc-Jersey boar this week from C. C. Southwell of Olathe. This boar was the sire of grand champions, sow and boar at the Montrose fair this year. Mr. Dunlap became interested in purebred hogs through the club work.





WEEKLY BULLETIN  
Of the Offices of  
WESTERN IRRIGATION AGRICULTURE  
and  
DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

December 3, 1921.

No. 23

Western Irrigation Agriculture.

Belle Fourche.

( No report received ).

Huntley.

( No report received ).

Newlands.

The general farm work was continued, which consisted of cleaning irrigation ditches, plowing and disking, during the week ending November 26. The cleaning of the ditches is rather slow work as they were badly overgrown and there is quite a length to them. It will be some little time before this work is finished.

The plowing that was accomplished was that still remaining on the proposed garden for next spring and B5 and 6. The orchard received a thorough disking.

During this period the blackberries were pruned and tied on new supports. The supports were arranged differently than heretofore in an endeavor to give more shade to the plant and fruit during the hot summer months.

San Antonio.

( No report received ).

Scottsbluff.

( No report received ).

Umatilla.

( No report received ).

Yuma.

( No report received ).

# THE UNIVERSITY OF CHICAGO

OFFICE OF THE DEAN

1100 S. MICHIGAN AVE., CHICAGO, ILL. 60607

TEL. (312) 937-1234 FAX (312) 937-1235

Dear Mr. [Name]:

Thank you for your letter of [Date].

Sincerely,  
[Signature]

[Name]  
[Title]

[Address]

[City, State, Zip]

[Phone Number]

The University of Chicago is a private, non-profit institution of higher learning. It is one of the leading universities in the United States. The University is committed to the pursuit of knowledge and the advancement of the human spirit. It is a place where the best minds come to learn and teach. The University is a place where the past meets the future. It is a place where the world is made better.

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[Address]

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Demonstrations on Reclamation Projects.Newlands.

On Monday of the week ending November 26, a trip was made to Reno, Nevada, to confer with the State Board of Live Stock Commissioners on matters pertaining to the quarantine against cattle coming into Nevada from California. Late shipments of dairy cattle coming into different sections of Nevada from California have, after the sixty-day retest in this state, shown so many reactors to the tuberculin test that the State Live Stock Board of Nevada have placed a quarantine on all cattle coming from California. Under the provisions of this quarantine shipments of cattle can be made only through special permit from the Nevada State Quarantine Officer and in case shipments are made from California, the parties making the importations must sign a waiver of all indemnities, should any of the cattle react after retesting after sixty days in this state. In order to avoid as much trouble as possible, the State Live Stock Board has suggested that importations be made from sources other than California. California has been a very convenient source from which to import dairy cattle into Nevada. The dairy herds as a rule are very large and the quality of the cattle good, and it is usually possible to secure one or more carloads of cattle from one individual which expedites purchases. The presence of tuberculosis, however, in California is so general, that the risk of importing it into this state, by bringing cattle from there is too great.

It is expected that a trip will be made into other districts in the very near future for the purpose of selecting three or four carloads of dairy cattle.

During the past week there were received 25 calls for assistance and visits were made to nine farms. One article was contributed to the local papers on herd record work.

Shoshone.

During the week ending November 26, 4 farm visits were made and 42 requests for assistance were received.

The mercury went to 12 below the morning of the 19th and by the 21st. 4.2 inches of moisture had fallen in the form of snow.

Assistance to the Veterinary Inspectors engaged in tuberculin testing was continued. To date, 14 reactors have been found. One man refused his consent to slaughter 2 registered Holstein cows and his farm was placed under quarantine by the State Veterinarian.

Progress was made towards the cooperative shipment of sheep, the number listed reaching 420 by Saturday.

Although a demand for over 100 calves of dairy breeding has appeared, it is not by any means certain that the importation will materialize, the money question still standing in the way to some extent.





Uncomroahgre.

The first snow of the season fell during the week ending November 26. It was about 16 inches at Montrose. This has nearly all melted and the resulting moisture with the rain which fell Thursday of this week has made most roads very bad. As the weather has been mild the storm was rather beneficial.

Two small flocks of poultry were culled this week, one for a man who had bought a flock with the privilege of turning back all culls, the other for a Montrose physician. Two herds of cows were tested for butterfat.

Two livestock sales were attended with men who wished to buy stock. Artt Brothers' sale of purebred Duroc-Jerseys and Holsteins on Wednesday was well attended but bidding was very slow on both cattle and hogs. Young, purebred cows, just fresh or due to freshen soon, sold for \$150; yearling bred heifers brought \$87 to \$97 and bulls could not be sold at all. Spring gilts brought \$15 to \$25 and one spring boar brought \$16. One man from Montrose who wanted a boar did not find what he wanted at the sale and bought one from Clements' herd at Paonia which is the fourth boar bought from that herd by project farmers this fall.

At the Holstein sale of W. A. Davis, held at Delta on Saturday, there was a large attendance and prices paid were much better on similar stock than at Artt Brothers' sale. The best grade cows brought \$112.00 each. A five year old registered cow, untested, brought \$325.00, the top price of the sale. A ten-day-old heifer calf from this cow brought \$75. A half sister of the same cow with a 17.4 pounds butter record (A.R.O.) sold for \$190 at Loesch Brothers' sale in September. Judge John C. Bell of Montrose bought this cow as well as most of the other good ones, ten head in all.



W E E K L Y   B U L L E T I N  
Of the Offices of  
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and  
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December 10, 1921.

No. 24

Western Irrigation Agriculture.

San Antonio.

Meteorological data recorded for the two weeks period ending December 3 were as follows: maximum temperature 84, minimum 34, greatest daily range 38, and precipitation 1.93 inches. Five days were cloudy, two partly cloudy, and seven were clear.

The third definite drought of the year was broken the night of November 27, when a rainfall of .31 inch was recorded. This was followed by a precipitation of 1.54 inches the night of November 30 - the latter being of a more general nature throughout Southwest Texas. Fall seeded crops will be greatly benefited by this moisture as small grains seeded early in the fall were suffering severely from the drought which had persisted since the first of October, and seed sown later was lying in the ground unable to germinate because of a dry seed-bed.

After being closed down for the preceding two weeks, the local cotton gins made their last run of the season on December 3, at which time only a few bales of cotton of very low grade were ginned.

Work on the station during the two weeks period consisted of manuring, plowing, and sub-soiling rotation plats; hauling the third cutting of sorghum from rotation and tillage plats; seeding flax variety test and flax nursery on fields C3 and A3, respectively; baling hay; burning cotton stalks from rotation and tillage plats, fields B4, C3, and C6; grubbing old trees from the nursery on A3; and shelling and cleaning corn for storage in our rat-proof bin.

Demonstrations on Reclamation Projects.

Newlands.

During the week ending December 3, two days were spent away from the project visiting two adjacent valleys in company with two ranchers in the hope of locating some dairy animals for sale. Nothing was located on this trip that was satisfactory. One of the parties wanting cattle will probably be supplied from a shipment that is hoped to be brought in from another state through this office.

The question of alfalfa weevil quarantine within this state was brought to the attention of the local board of county commissioners during the week. It was hoped that the county commissioners in the two counties in which the project is located would join together and place a quarantine officer on the





Newlands (continued).

boundary line between the alfalfa weevil infested territory and the free territory of the project. The commissioners of Churchill county in which most of the project is located took the stand that the alfalfa weevil quarantine between the counties was a state matter and only officials appointed by the state would have any power to enforce a quarantine and also that the expenses of such quarantine officers should rightfully be borne by the state. The state officials have been rather inactive in this connection and this is the reason that some pressure was brought to bear on the county commissioners. The matter has been referred back to the governor and the state quarantine officer by the commissioners of the various counties with the recommendation that every precaution be taken to keep infection confined to the original county where it first started..

During the past week one article was contributed to the local paper on the turkey industry on the project. Some effort will be devoted to getting the turkey industry back on the extensive scale as it was before the war.

During the week there were 37 calls for assistance, and eight visits were made to farms.

Shoshone.

During the week ending December 3, forty-one requests for assistance were received and 12 farm visits were made.

A representative of a sheep feeding outfit in Nebraska appeared in Powell on December 2, offering \$6.50 per cwt. after a 12 hour shrink for lambs on board cars. Several owners sold thus breaking up the collective shipment that had been planned; then most of the small owners decided to sell, also. If the situation does not change, delivery will take place on the 15th. instant..

Thirty milk cows ( 5 herds ) were tested for butter-fat and some work done on the milk sheets. The average price of butter-fat for the month of November at the Powell Creamery was 35 cents per pound.

Tuberculin testing was completed, twenty reactors being found in 1300 dairy cattle tested.

A meeting of water users occurred Saturday to consider what relief measure should be asked of Congress.

Uncompahgre.

A live stock sale, which included a few registered Jersey cattle was attended during the week ending December 3 and a man who has talked of starting a herd of purebred Jerseys was assisted in selecting a cow and bull. These were both good individuals and very well bred. The bull was the grandson of a \$25,000 animal, and butterfat records in his pedigree were good. He sold for \$56. The cow brought \$111.00. These were young animals, three and four years old.

The local bull association attempted a meeting on Saturday for the purpose of discussing the advisability of disbanding. Most of the original members of the association have moved away or disposed of their cows and there are so few cows left in the locality that it is really a question if the organization is needed. A quorum was not obtained at



Uncompahgre (continued).

this meeting. Three-fourths of the membership was required to dissolve, at the first call. Another meeting will be called for later in the month.

A trip was made to Grand Junction to confer with County Agent McCann and representatives of the State Agricultural College and Department of Agriculture. An extension school on honey production was in session and was attended. Dr. Phillips of the Bureau of Entomology was one of the speakers at the school and some time was spent with him.

Some work was done in connection with securing applications for tuberculin testing of dairy herds under the cooperative plan of the Department of Agriculture of the United States. One herd is on test on the project, one other application has gone in, and there are a number of good prospects.

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W E E K L Y   B U L L E T I N

Of the Offices of

WESTERN IRRIGATION AGRICULTURE  
and  
DEMONSTRATIONS ON RECLAMATION PROJECTS.

Vol. XIX.

December 17, 1921.

No. 25

Western Irrigation Agriculture

Newlands.

During the period ending December 10 the general line of work was continued as has been conducted for the past several weeks. The irrigation ditches received further cleaning and plowing was continued on C11, 12 and 13.

On December 4, Mr. Scofield arrived in Fallon. Soon after his arrival Messrs. Means, Scofield, Cline, Richardson, and Knight left for the alum claims. Several hours were put in there going over the ground and making plans as to the best method of procedure in getting out the alum which is to be used at the station. It was finally decided that with the cooperation of the Reclamation Service it would be best to barge the ore to the dam and then haul from there. Before proceeding with this it will be necessary to definitely locate the ground on which the claim is located and gain some idea of the amount and percentage of the alum present in the ore. The first work of determining this has commenced; a cut some eight feet wide has been driven in the lower side and a pit started on the top of the hill. It is planned to put this pit down some ten or more feet and sample the sides and bottom. At about three feet the regular underlying blue colored rock has been encountered which is very hard to handle with a pick and shovel. The plans now are to drill holes and dynamite the pit and in this manner much labor will be saved and the hole can be forced to a greater depth.

Mr. Cooley arrived at the station December 5. During that day and the one following the plans of the farm work were gone over. The alum treatment on "Y" was planned. This consists of treatments up to 60 tons per acre on Y-1, Y-2, half of that quantity on Y-3 and Y-4 and one-quarter that amount on Y-5 and Y-6.

Two farm visits were made, one to Mr. Heizers and one to Mr. Long's. At Heizer's, the alum treatment was viewed and some soil taken for shipment to Washington. The trip to Long's was to view the herd of pure bred Holsteins that Mr. Long owns.

During Mr. Scofield's stay some experimenting was carried out in the laboratory in determining a short, accurate method for establishing the amount of alum to be found in ore samples. In this manner it will be possible to make quick determinations where there are a great number of samples taken.

The maximum temperature for the week ending December 3 was 67, minimum 10, and precipitation .08 inch.

The maximum temperature for the week ending December 10 was 55, minimum 9, and precipitation 0.



San Antonio.

Meteorological data recorded for the two weeks period ending December 17 were as follows: maximum temperature 84, minimum 27, greatest daily range 44, and precipitation .03 inch. Nine days were recorded as clear, 3 partly cloudy, and 2 cloudy. The first killing frost of the season occurred the night of December 4 when the minimum temperature of 27 was reached. The last killing frost in the spring occurred the night of February 23, giving a frost-free period of 284 days. This is the longest frost-free period recorded at the experiment farm since 1907, except in 1909 when a period of equal length was recorded. The average number of frost-free days per season, from 1907 to 1921, inclusive, is 257.

About five acres on fields B3, C3, and D3 were seeded to Texas Red Rust Proof and Selection 1913 oats. A planting of McAdoo field peas was made on field A3 for seed production. This planting has emerged to an excellent stand.

Barnyard manure at the rate of approximately 16 loads (double wagon box) per acre has been applied to Orchard A1.

Fall plowing of rotation and tillage plats was completed and plowing of field C6 was started. Other farm work done consisted of shelling, cleaning, and storing corn; grubbing pomegranates from field C3; repairing fences; clearing cotton fields of stalks, and general repair and upkeep of grounds and buildings.

Scottsbluff.

Under date of December 17, Mr. Holden wrote the office as follows concerning conditions on the experiment farm and on the project:

"We are enjoying real California weather here in Western Nebraska. For four days last week it was hardly down to freezing and it is like a spring day today. A snow storm of about 8 inches fell on December 3 but the extreme warm weather that followed soon melted it. The road were as sloppy and muddy as in spring. While we have had some zero weather it has not lasted but a few days. The maximum temperature since November 15 was 68 degrees, minimum -1, and precipitation .64 inch.

"Practically all beets were harvested in very good condition. Most silo beets have already been delivered. The Mitchell and Bavard factories expect to complete slicing beets by the 28th of December and the factories have been slicing considerably above their rated capacity. The total tonnage for the valley is about the same as last year although the acreage was considerably less.

"Mr. Simmons of the Sugar Company has stated that the Great Western Sugar Company will not put out their 1922 contracts until after March 1. He intimates that the price of beets next year will be less than the price paid for the 1921 crop.

"Perhaps many beet growers have as much clear money from their beet crop just harvested as they did from their 1920 crop, even though the price of beets was greatly reduced. There has been a tendency among growers to cut down expenses by doing most of the work themselves and





Scottsbluff (continued).

buying less. The landlord, however, is hard hit. In many cases the returns from his land will not more than pay taxes. It is claimed that in the Sunflower Consolidated School District the total taxes will amount to between \$9 and \$10 per acre.

"Potatoes were the most profitable crop grown during the past season. the Yield was fairly good and the price received was considerably above the level of other prices. The price of corn has advanced but wheat has decreased. Good hard winter wheat will only bring 75 cents per bushel at the local elevators. Corn is selling at \$1 per cwt. in wagon load lots. Hay is \$5 per ton in the stack. A little hay is being baled and shipped out, the baled hay bringing \$9 per ton on board cars.

Very little feeding is being done by farmers. A commission company is feeding a large number of lambs and ewes at the different sugar factories. They are being fed wet pulp. There are also quite a large number of cattle being fed out on wet pulp.

We are just beginning our lamb feeding test. We have 12 lots of 25 lambs each and they are being fed the same as last year. They weigh a little better than 60 pounds each and cost \$8 per cwt. at Denver about one month ago. Feeding lambs have advanced about \$1 per cwt. since that time.

Demonstrations on Reclamation Projects.Shoshone.

During the week ending December 10, three farm visits were made and 31 requests for assistance were received.

Five owners of cows turned in milk sheets for November. Of these, four appear to have been kept accurately, and consequently have been summarized and prepared for publication.

A part of the week was taken up with an investigation of the state of the Shoshone Grazing Association, an organization which for several years has supervised the herding of cattle owned by project farmers on the forest reserve. It seems clear that the object of the organization fell far short of accomplishment during the grazing season of 1921, that the present officers are inactive, and that the decreased number of live stock may make a continuance of the association not advisable.

Two live stock judging demonstrations were conducted for the agricultural class of the Powell high school.

Uncompahgre.

Work on the annual report was started in a small way during the week ending December 10, the Reclamation Service census reports having been partially tabulated.

Parts of two days were spent in visiting owners of dairy cattle to secure applications for tuberculin tests under the state law enacted by the last session of the legislature, providing for the cooperation of the state with the U. S. Department of Agriculture in a



Uncompahgre (continued).

tuberculosis eradication campaign. Six applications have been received and several others are in prospect.

The Delta County club stock judging team which won the state contest at Pueblo in September was given instructions on dairy cattle and hogs on Saturday, in preparation for the inter-state contest to be held in Denver next month.

One call was made to examine hogs suspected of having cholera or some other infectious disease. The trouble could not be diagnosed positively but had no appearance of cholera.

Milk and cream tests were run for two men.

A letter was sent to all members of the bull association, calling a final meeting of the association for December 23, at which time the organization will probably disband.

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WEEKLY BULLETIN  
Of the Offices of  
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Vol. XIX.

December 24, 1921.

No. 26

Western Irrigation Agriculture.

Newlands.

The maximum temperature for the week ending December 17 was 65, minimum 0.

During this period, two of the men took the balance of their annual leave, thus the field work of the farm was held up to some extent. The teamster continued hauling manure until Wednesday, the balance of the week being put in at the alum claim at Lahontan dam. The work there consisted of some prospecting to uncover the necessary amount of alum for immediate use, some 200 tons. A pit was sunk to a depth of 11 feet from the top of the hill and two tunnels were driven into the front of the hill at points some 20 feet apart. Numerous samples were taken which will be analyzed to determine the amount of alum the ore carries and to what depth we can expect to find suitable ore to mine.

Demonstrations on Reclamation Projects.

Newlands.

During the week ending December 10, final arrangements were made for making a trip into California for the purpose of selecting another shipment of dairy cattle to be imported into the Newlands project. Much of the time Monday and Tuesday was taken up in going over the work of this office with Mr. Cooley and Mr. Scofield, who spent these two days on the project. The trip to California was started on the evening of December 8 and Modesto, California was reached by noon of the next day. The rest of the week was spent in attending a public sale of dairy cattle and in interviewing other parties offering cattle for sale. Jersey cattle were being offered from \$60 to \$100, depending on age and quality. Holstein cattle ranged from \$75 for heifers coming with their first calves, to \$150 for good mature cows. There were considerable cattle offered for sale in this district but after conferring with a local veterinarian and the County Agent, I was informed that the prospect of getting dairy cattle from this section free from tuberculosis was not at all encouraging. Acting upon this information the trip was continued to Tulare, California, where it was reported there had been much activity in the eradication of tuberculosis and where a county tubercular testing law had been enforced for a long time.

The district around Tulare, California, was found to have a large number of very good Holstein grade dairy cattle and a few herds of good



Nevlands. (continued).

Holstein grade dairy cattle and a few herds of good Jersey cattle. Up to the time this visit was made to the place there had been practically no rain for almost a year. The shortage of water was causing many dairy herds to be offered for sale. Feed was not plentiful and young non-producing animals were being offered for sale quite generally. Selections were made from first and second calf Holstein springers at prices ranging from \$60 to \$80 per head. There was no opposition encountered against tuberculin test, all cattle being purchased subject to this test. It was found that a number of herds in this district had been regularly tested for tuberculosis. All purchases were made from American owners as it was not possible to do business with Portuguese and Italian owners because of their opposition to the tuberculin test.

Because of the quarantine regulations imposed by Nevada on all cattle coming into Nevada for breeding purposes, this last importation is subject to a retest in sixty days by the Nevada State Quarantine Board and any animals reacting to this tuberculin test will be lost to the owner, as they must be destroyed.

Sixty-three animals were purchased on this trip. The quality of the animals was considered very good.

Shoshone.

During the week ending December 17, ten farm visits were made and 23 requests for assistance received.

The forepart of the week was taken up with miscellaneous questions relating to live stock, chiefly dairying. Three live stock judging demonstrations were made for high school students.

On the 16th, sixteen carloads of lambs, 9 from Powell and 7 from Ralston, were shipped to feed yards near Chicago. Among these lambs were ones which had previously been listed for cooperative shipment. All were bought for feeders and nearly all brought \$6.50 per cwt. at shipping point. On the day of delivery the market was about 75 cents per cwt. higher than it was when the contracts were signed.

Some time was spent in assisting the County Agent plan for and advertise again Farm Bureau organization meetings to be held December 19 to 21, inclusive.

Uncompahere.

The annual meeting of the Montrose County Farm Bureau was held on Tuesday, of the week ending December 17. This was a very satisfactory meeting from every standpoint. There were 210 farmers present. Officers and an executive committee were elected and the remainder of the time was taken up with the discussion of topics of general interest connected with the Farm Bureau program. A gratifying absence of radicalism was noted. The officers and executive committee include some of the most progressive farmers of the county.

This week should have been spent on the annual report but on account of engagements previously made, only a little time has been given to that matter.





Uncompahgre (continued),

R. W. Schafer, Assistant State Leader of County Agents, in charge of the Western Slope of Colorado had requested some assistance in Delta County, having in mind a revival of interest in county agent work. One day and parts of two others were given to this work.

County "achievement day" on Saturday brought 140 club members, local leaders and friends of club work to Montrose to hear the state club leader, Miss Sheridan and State Senator J. J. Tobin, County Club Leader. Achievement pins were awarded and state charters presented to clubs which had filled certain requirements. The twelve-months club was emphasized throughout the meeting.

A little work has been done in connection with the tuberculin testing of dairy herds. So far seven applications have been made and several other owners have expressed themselves as in favor of the test. One herd is going on private test, the owner not being in position to comply with all of the requirements to secure the state and government test.



WEEKLY BULLETIN  
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Vol. XIX.

December 31, 1921.

No. 27

Western Irrigation Agriculture

Newlands.

During the two weeks period December 18 to 31, the work of manuring the cow pasture was continued and finished. This required about 23 tons of manure, but it is thought that the results will more than pay the expense of the fertilizer and work of spreading.

Work was continued on the ditches as far as possible as the latter part of this month has been exceptionally wet for December. As this was a particularly good time for inside work several things that were needed were carried through to an improvement of the farm buildings and in preparation for the coming planting season. New stanchions were built in the cow barn in preparation for the feeding of silage. The hay racks were also repaired and the yard cleaned. Some three hundred stakes were painted in preparation for the spring plantings.

On December 19, Mr. H. M. Hall of the Carnegie Institute visited the station. The purpose of his visit was two-fold, (1) to plant six plants of the common rabbit brush on the station. The plants were brought down from Gerlach, Nevada. It has been found that these plants contain some 7 per cent rubber, while our local variety contains but 2.5 per cent. It is thought by Mr. Hall that the Gerlach variety might produce the same amount of rubber under local conditions. If such is the case there is a possibility, by selection and breeding, that a higher percentage of rubber can be obtained and thus a profitable industry built up; (2) to investigate the recent cause of the blight of beets. The distributing agent is a small leaf hopper and it was in an endeavor to locate some of these insects that a trip was made over the project. A considerable number of the host plants of this insect were found but no presence of the hopper itself. The common salt bush is one of the chief winter hosts of this pest.

San Antonio.

Climatic conditions during the last half of December were unfavorable for fall-seeded crops. No precipitation occurred and all small grains have made practically no growth. Flax plantings made at the station to date are in a discouraging condition. Meteorological data recorded during the two weeks period ending December 31 are as follows: maximum temperature 83, minimum 31, greatest daily range 32, and precipitation trace. Three days are reported as cloudy, nine as partly cloudy, and two as clear. Unseasonably warm weather and cold "northers" have alternated with disagreeable frequency and regularity.

Plowing of fields C6 and B4 was completed. Continuously cropped sorghum plats which have become heavily infested with Johnson grass were



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San Antonio (continued).

spring-tooth harrowed for the purpose of exposing as many of the rootstocks as possible.

The pomegranate planting on field C3, consisting of about three-quarters of an acre and containing some 350 plants, was removed. In doing this work one hole was made under the center of each plant with an inch and a half soil auger and one -half stick (four ounces) of 40 per cent strength dynamite exploded in each hole. It is believed that more effective work could have been done by using 20 per cent strength dynamite, which could not be obtained in San Antonio, although very satisfactory results were obtained with the higher strength dynamite.

One -half acre at the north end of field D3 was planted to Harding grass (*Phalaris stenoptera*). This seed has been harvested in small amounts during 1920 and 1921 from a nursery row planted in 1918. It is desired to test the value of this grass as a winter pasture for Southwest Texas.

Repair and refinishing of the north half of the Mess house was begun.

Demonstrations on Reclamation Projects.Minidoka.

The greater part of the week ending December 24 was taken up in completing the annual report for 1921 and the compiling of data for same.

Mr. L. M. Savage of Burley, having a herd of registered Holstein cows, has made the following record the past year. This record is taken from the milk sheets. It is a record of eight cows on which a careful record was kept for twelve months. The milk figures are absolutely correct but the butterfat records are not absolutely correct because only one test was taken on each of the cows. This test was taken during the twelfth month. The high producing cow produced 15,594.3 pounds of milk. The high butterfat cow produced 552.18 pounds of butterfat. The average pounds of milk produced by these cows was 11,871.2 pounds per cow, and the average butterfat production was 419.32 pounds per cow.

This is a record of one of the best Holstein herds on the Minidoka project. These cows were fed an abundance of good alfalfa hay, supplemented with a rather heavy ration of grain composed of oats, barley and a small amount of bran, the greater portion of the ration being composed of barley. This shows what can be done with good cows when fed the feeds grown on the Minidoka project.

Shoshone.

During the week ending December 24, 2 farm visits were made and 31 requests for assistance were received.

Mr. A. E. Bowman, Director of Extension Work in Wyoming, arrived on the Shoshone project Monday and assisted Mr. Allan, the County Agent, in explaining the nature and purpose of the Farm Bureau. Meetings of farmers were held at Ralston, Powell, and Garland, after each of which a community organization was perfected. On Thursday a county organization and a county plan of work were accomplished at Cody.





Shoshone (continued).

The problem of disposing of hay became more serious lately. One buyer who had been paying \$6 per ton on cars at shipping point, with a promise to pay the balance of \$2 when returns should be received, had to stop buying because of a lack of money or credit, the banks refusing longer to finance his operations. At the time a number of cars (loaded) were on track waiting to be billed. These were finally sent to Kansas City commission houses without any part of the price being advanced. For a time shippers were doubtful whether they would ever receive the balance due, but since then a number have been paid in full and there is now a good prospect that all will be.

Butterfat tests were made for three herds. Since the 20th. the price of butterfat locally has been 32 cents per pound.

During the week ending December 31, four farm visits were made and nineteen requests for assistance were received.

The week was largely given to the preparation of an annual report. In addition, two farms were visited to investigate sickness among sheep. A meeting called by the Powell dairy committee to complete arrangements for the purchase of dairy calves was attended. Considerable progress was made although arrangements were not completed.

A ten per cent reduction in the freight rate on hay to the Twin Cities amounting to \$1.80 per ton went into effect on January 1 and is expected to increase returns to growers.

Uncompahgre.

During the week ending December 24 as much time as possible was given to the annual report, no field work having been done.

Three men have been in to make application for tuberculin tests of their dairy herds. A balanced ration was figured for one man, silage measurements for another, and a lot of miscellaneous calls were received.

The final meeting of the bull club was held in the office on Friday and the organization was dissolved, money on hand being divided between stock holders and boys' and girls' club fund. This association has served a useful purpose but members felt there was nothing to warrant its continuation.

The premium list for the Olathe corn and potato show was prepared with Mr. King and Mr. Wilson, Smith-Hughes teacher in the Olathe High School during the week ending December 31. A tentative premium list and program for a poultry show at Delta to be held January 26-28 was also prepared with Mr. King and Mr. Allison, a poultry breeder of Olathe who began work on the question of holding a show at just the same time the matter was taken up by this office. A temporary board of directors was chosen at a meeting this week, this office being asked to take care of the necessary clerical work.





Uncompahgre, (continued).

Milk tests were run on four herds this week, two of these being on regular test and one other probably will go on a monthly test, while another dairyman has asked for a monthly test beginning in January.

A joint meeting of three local Granges was held in Montrose on Saturday night, about 150 farmers and farm women being present. A number of topics of common interest were discussed. A local meeting for the purpose of discussing feeding of dairy cows has been arranged for the Maple Grove district next week.

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